Issue 175
PS
1967 Series
THE PREVENTIVE MAINTENANCE MONTHLY
CHECK THE TM AGAIN, HAMMERSHLAG. THERE MUST BE A BETTER WAY TO BEAT THE HEAT THAN THIS!
Will Eisner

MAINTEN

The last few weeks Half-Mast has been jawing with a lot of you guys about your maintenance and supply problems.

You'd never believe it, but the **one** thing that's bugging men and their outfits everywhere is publications: No tech manuals, old and out-of-date manuals, or the wrong manuals for the equipment on hand. A situation like that is bad . . . for maintenance and for getting the right repair parts.

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Up-snuff 'em by checking 'em over at least every 3 months. If your equipment, tools, or TOE change, your publications orders (on the DA 12-Series forms) have got to change. The Publications Center won't know you've got a new model multi-fuel truck or a new kind of weapon unless you tell them . . . on the 12-Series forms.

Keep those publications order forms up to date. And this includes any change in your address.

Also, when you need more pubs than your outfit received, or you need new ones to replace worn or lost copies, send in the order on a DA Form 17 to the Publications Center. For more details, see DA PAM 310-10.

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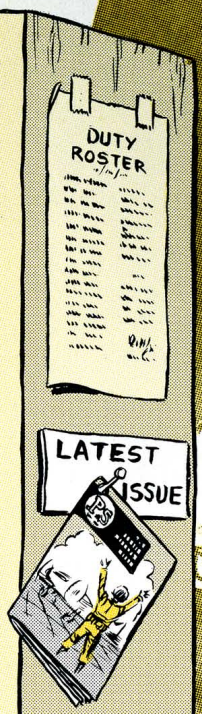

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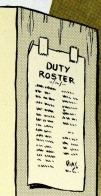
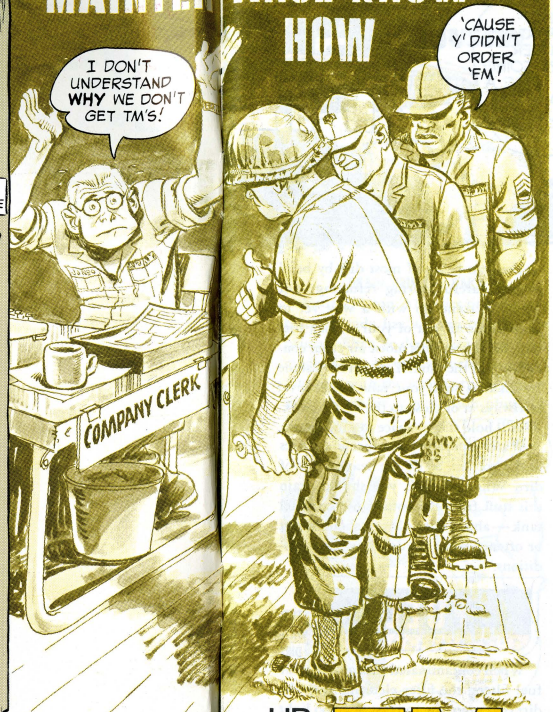


MAINTENANCE KNOW-HOW



COMES FROM UP TO DATE TM'S

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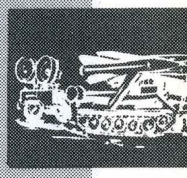

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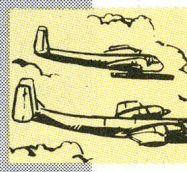

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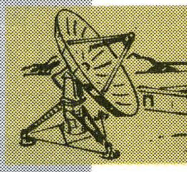

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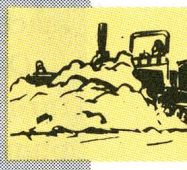

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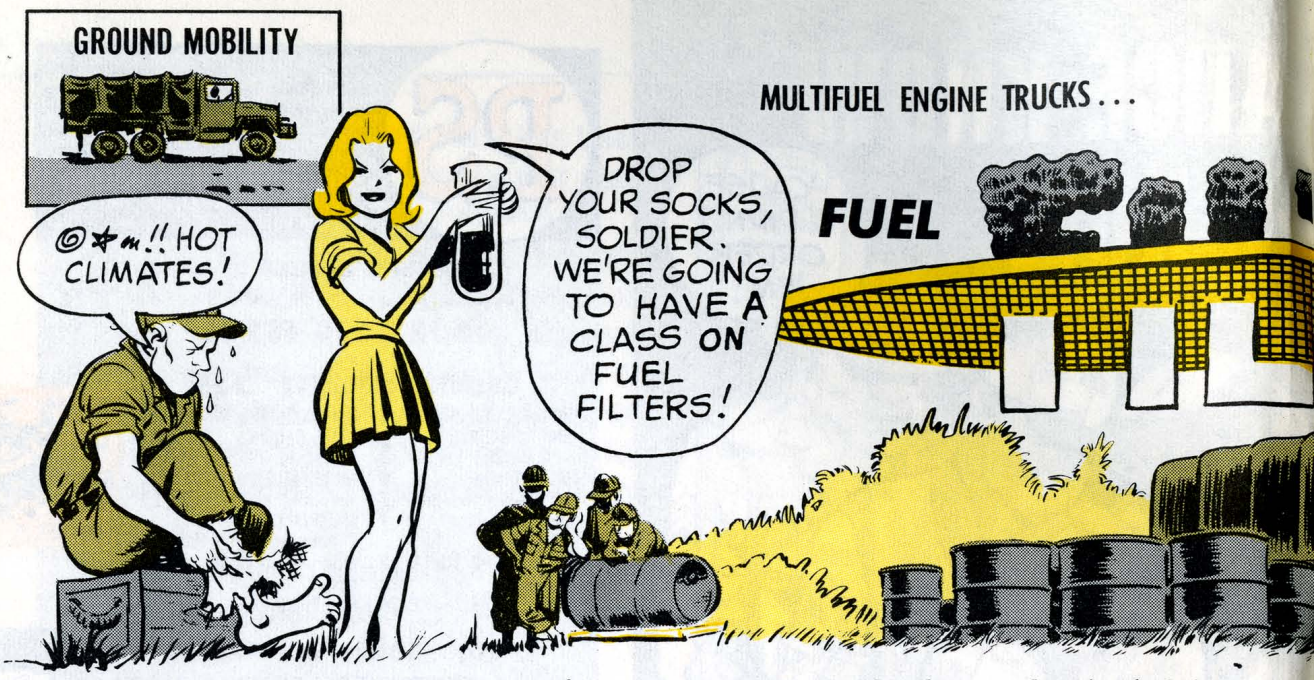


Let's face it — whether it's your feet or your fuel, you just gotta be extra fussy in hot, humid, tropical operations.

Clean feet and dry socks are your best protection against jungle rot, fungus and infection.

Water and dirt are your enemies too in your 2½-ton or 5-ton multifuel truck's fuel system.

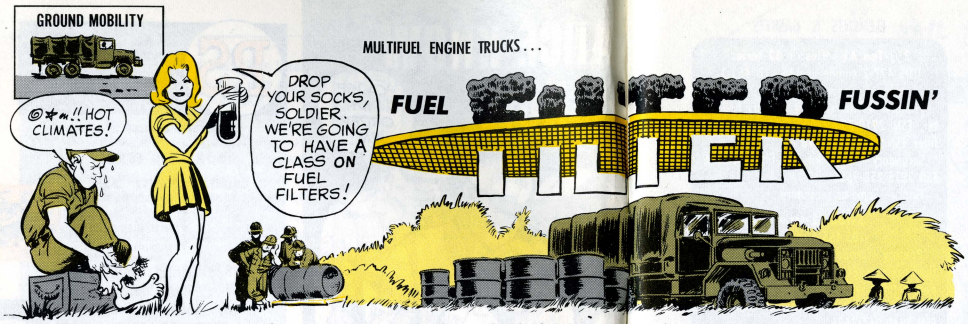
Water in your fuel — especially diesel fuel — is a setup for fungus and bacteria growth that'll plug your filter elements solid. And when water sneaks by your filters, it gets into your fuel injection pump and rusts those finely-machined parts.

Dirt is like a sandblast when it goes thru your high-pressure fuel injection pump, grinding and chewin' away at the innards of a pretty expensive piece of equipment.

You can head off most dirt by bein' mighty careful during refueling. But nobody's come up with a way yet to keep moist air out of your truck's fuel tank or to keep this moist air from condensing in the tank. You can help some by making sure your tank's fuel level is always at or close to the FULL mark. This'll hold the air space to a minimum.

Water separates from fuel and settles to the bottom. So do the heavier bits of dirt. When possible, you should drain this stuff from the bottom of your fuel tank — about once a week should do it or oftener when required by local conditions.

When contaminated fuel gets to your fuel filters, the filter elements trap the dirt that's moving too fast or is too light to settle out. But it's that water and dirt sittin' on the bottom that you're after when you —



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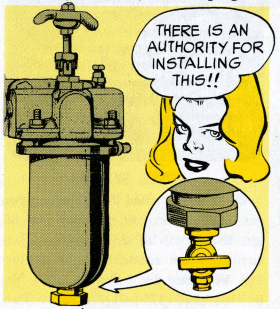
DRAIN PRIMARY DAILY

Your 2½-ton A1-series or A2-series truck already has a drain cock on the primary filter. So do the late-production model 5-ton A2-series trucks. But your 5-tonner with the scraper-type primary filter may have only a drain plug. TB

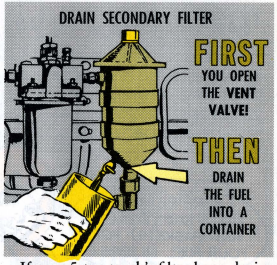


750-933-1/2 (Apr 66) is the authority (2nd article, page 57) for your organizational mechanic to drill and tap the plug and install Cock, drain, FSN 4820-276-9040 or FSN 4820-849-1220.

Before draining your 5-ton truck's scraper-type primary filter, give the handle on top 2 complete turns to scrape the dirt off the filter element.

Drain fuel into a clean can or other approved container. Then check it close for signs of water and dirt.

If you spot any contamination—



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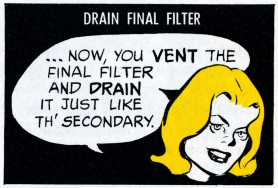

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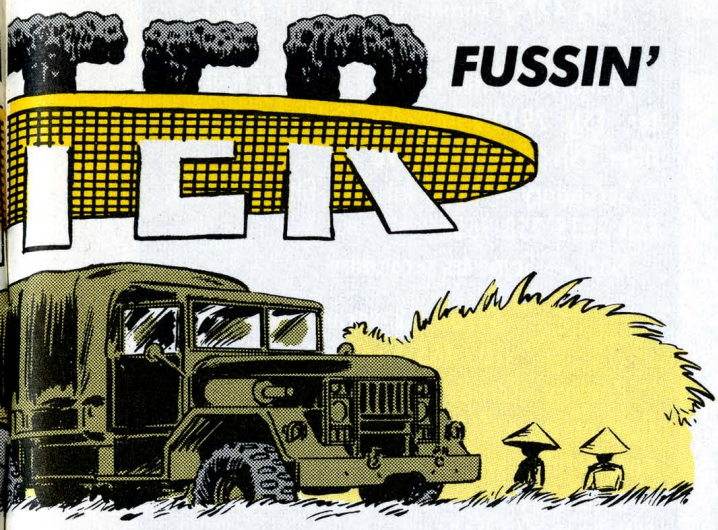
MORE



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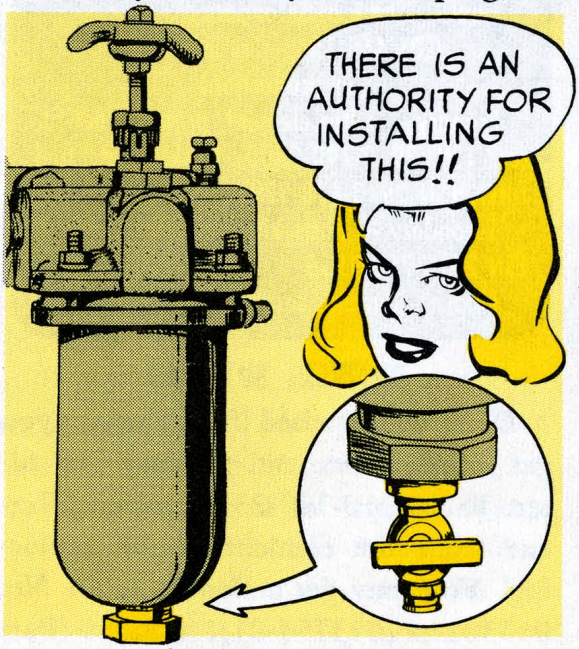

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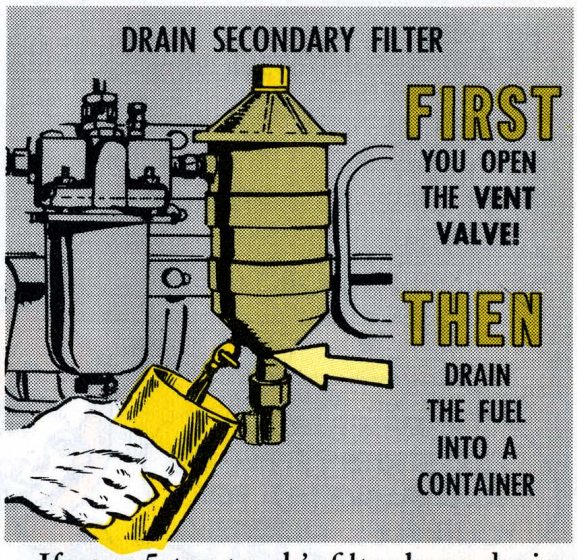

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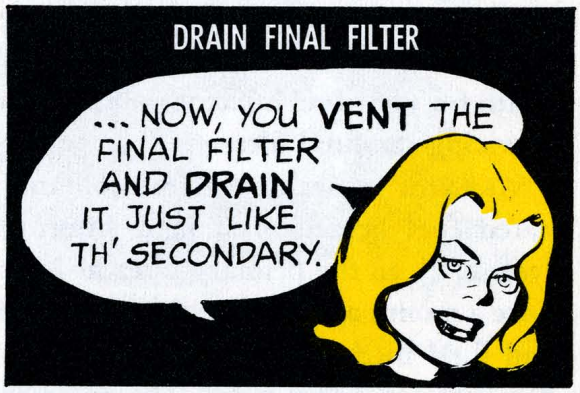

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PS MORE

bug 'em out now. This is the last filter before the fuel goes into our fuel injection pump.

Pour some into a clean glass jar or bottle and let it stand for a few minutes. Then see if there's water on the bottom or dirt specks floating around.

Foul fuel at this stage means you sing out for your organizational mechanic to do a thorough job of—

FILTER SERVICING

Good directions on cleaning fuel filters and changing elements are in para 77 of Ch 2 (Dec 65) to TM 9-2320-209-20 and in para 83.9 of Ch 3 (Nov 66) to TM 9-2320-211-20.

Since the only reason for cleaning filters and replacing elements is to get foreign stuff out, it makes sense to be doggoned careful not to get dirt and other junk in while the filters are being serviced. This's a matter of life-and-death for your fuel injector pump when servicing the final filter.

As extra insurance against contaminated fuel getting past your filtering system, clean the primary filter at least once a month and replace the secondary and final filter elements at least every 3 months or 3,000 miles. The primary filter element is replaced only when it's damaged or so plugged with dirt that it can't be cleaned.

ELEMENTS 'N' GASKETS

2½-Ton A1-series or A2-series
(LDS 427-2 engine in A1 — LD 465-1 engine in A2)

Primary — Filter element, primary fuel filter, FSN 2910-790-2300; Gasket set, fuel filter, FSN 2910-678-3298

Secondary — Parts kit, fuel filter element, FSN 2815-758-9556

Final — Same as secondary

5-Ton A2-series
(LDS 465-1 engine)

Primary (scraper-type) — Filter element, fluid pressure, FSN 2910-350-6850; Washer, non-metallic, syn rubber, FSN 5330-533-1977

Secondary — Parts kit, pressure fluid filter, FSN 2940-067-7625

Final — Same as secondary

(LDS 465-1A engine installed per Ch 3 to TM 9-2320-211-20)

Primary (scraper-type) — Filter element, fluid pressure, FSN 2910-350-6850; Washer, non-metallic, syn rubber, FSN 5330-533-1977

Secondary — Parts kit, fuel filter element, FSN 2815-758-9556

Final — Same as secondary

(LDS 465-1A engine installed in production)

Primary — Filter element, primary fuel filter, FSN 2910-790-2300; Gasket set, fuel filter, FSN 2910-678-3298

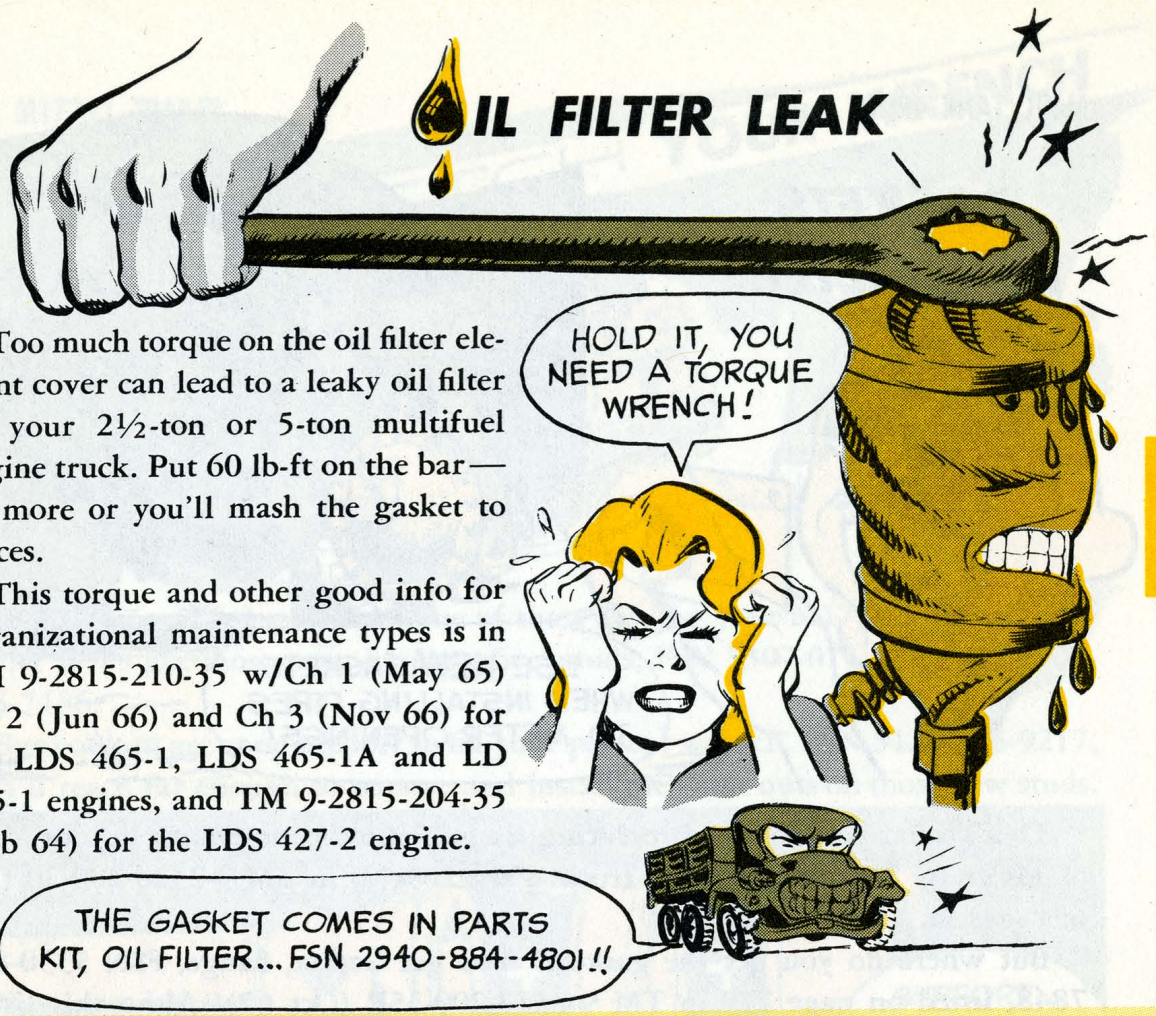
Secondary — Parts kit, fuel filter element, FSN 2815-758-9556

Final — Same as secondary

DIFFERENT BUT SAME

Don't be surprised if the element you get in Filter element, primary fuel filter, FSN 2910-790-2300, looks different from the element you're replacing. You may get a Bendix (Part No. 053301 or 053754-01), a Fram (Part No. 4089) or a Purolator (Part No. 6664482). They all meet the same specs and do the same job.

OIL FILTER LEAK



Too much torque on the oil filter element cover can lead to a leaky oil filter on your 2½-ton or 5-ton multifuel engine truck. Put 60 lb-ft on the bar—no more or you'll mash the gasket to pieces.

This torque and other good info for organizational maintenance types is in TM 9-2815-210-35 w/Ch 1 (May 65) Ch 2 (Jun 66) and Ch 3 (Nov 66) for the LDS 465-1, LDS 465-1A and LD 465-1 engines, and TM 9-2815-204-35 (Feb 64) for the LDS 427-2 engine.

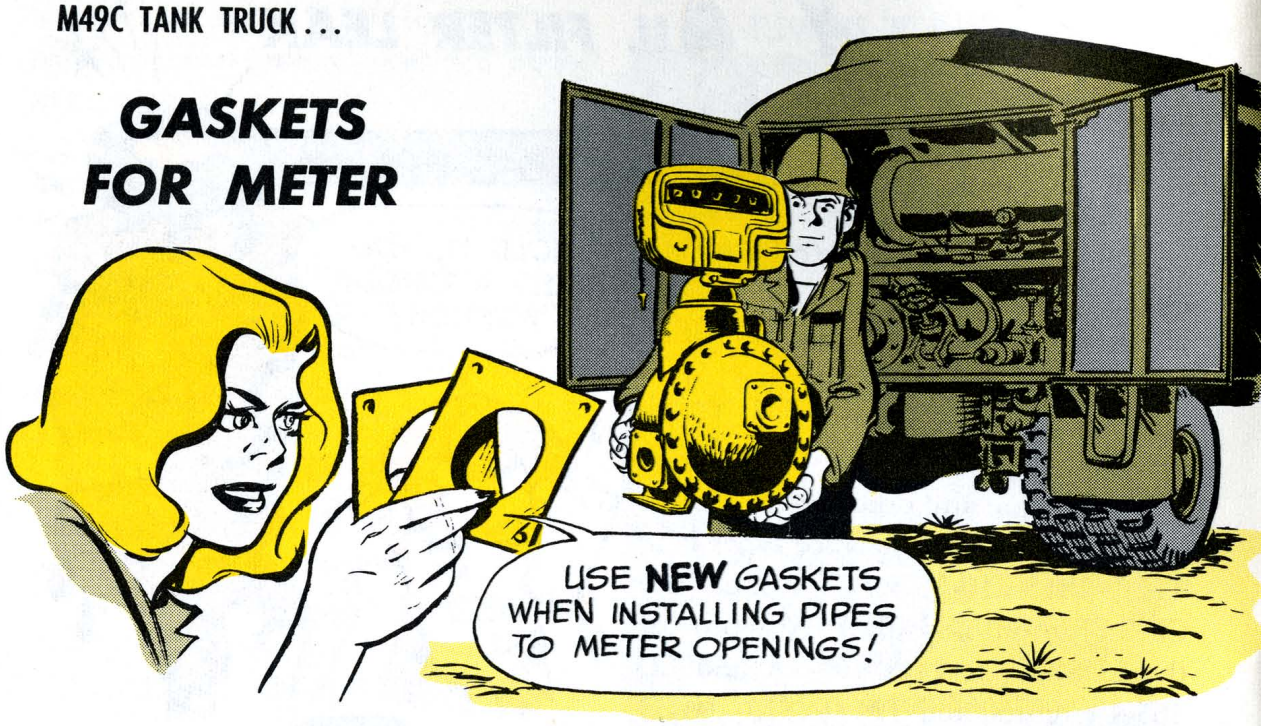
DIPSTICK FOR MULTIFUELS

You're behind times if you don't have Gage, rod cap, liquid level, FSN 6680-887-1334, in your 2½-ton or 5-ton multifuel engine truck. This new dipstick replaces FSN 6680-863-3154. The new one has the FULL mark at 21⅛-in from the bottom of the dipstick screw cap. It's in TM 9-2815-204-35P (Jan 65) for the 2½-ton A1-series; in TM 9-2815-210-35P (Sep 64) for the 5-ton A2-series; and in Ch 1 (May 65) to that TM for the 2½-ton A2-series. And it'll be showin' up soon in the TM-20P's for those vehicles.

You'll see that same FSN in Ch 2 (May 66) to TM 9-2300-223-20P listed with Gage, oil pressure. It's a slip, natch—besides, the dipstick isn't a PLL item anyway.

M49C TANK TRUCK . . .

GASKETS FOR METER



That's what you do when replacing the gallon-indicating meter in your M49C or M49A1C 2½-ton fuel tank truck. Para 265c(2) in TM 9-2320-209-20 (Apr 65) says so.

But where do you get the gaskets? You get Gasket, flange, FSN 5330-832-7848, listed on page 279 in TM 9-2320-209-35P (Oct 62). Altho this listing shows the gaskets going with the delivery pump, these're the same gaskets you use with the meter.

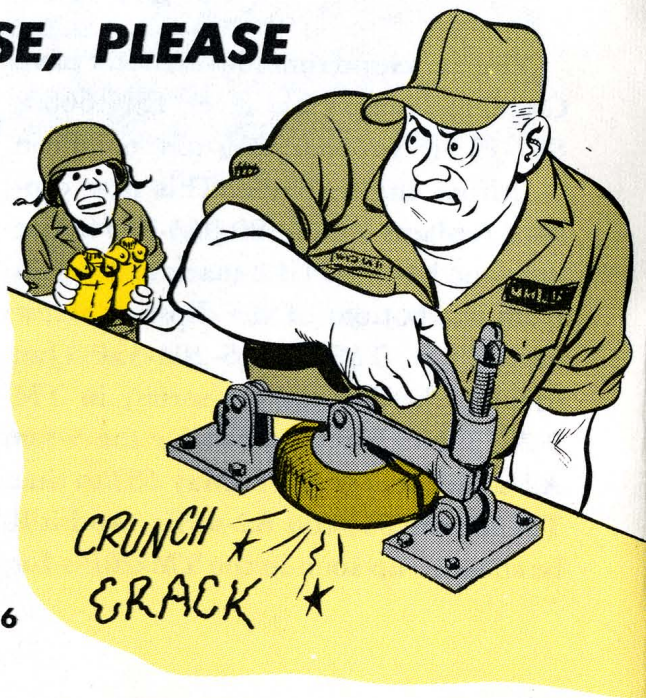
If you've got an M49A2C tanker, your meter uses Gasket, FSN 2590-930-5952, listed in Ch 3 (Sep 66) to the -35P.

WITH EASE, PLEASE

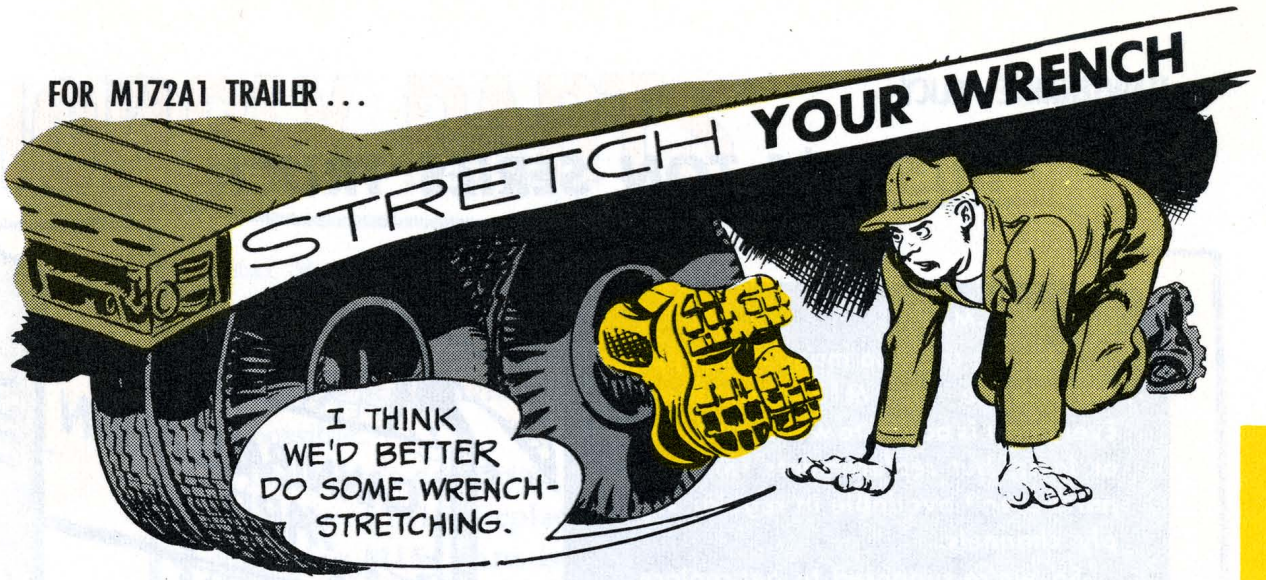
Nothing like a swig of clean water.

But clean water might be hard to come by if you make with the muscles in tightening down the filler pipe cover on your M149 water-tank trailer.

You want to tighten the wingnut just enough to keep the cover snug against the rubber seal. Too much oomph and you'll put cracks in the fiberglass tank —below the seal. And—until your support people can do some repair work —cracks can let in dirt and whatnot.

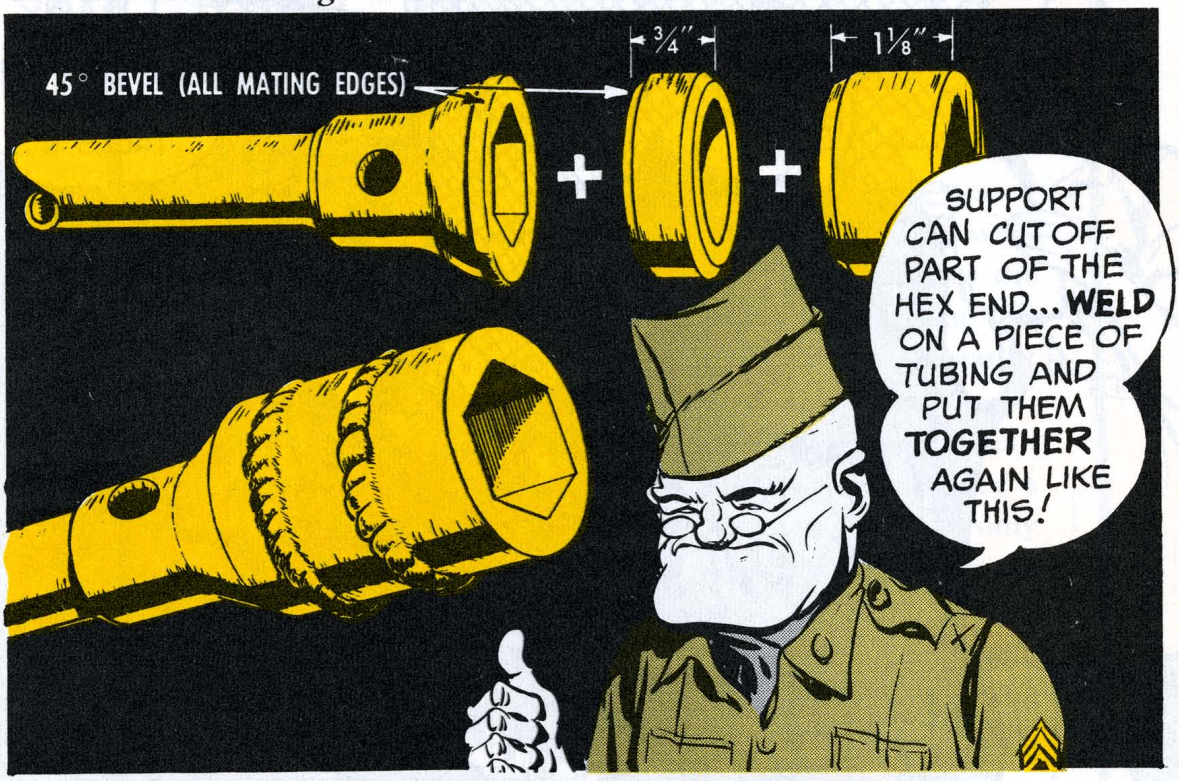


FOR M172A1 TRAILER . . .



You'll get a new lug wrench one of these days for your M172A1 25-ton semi-trailer if it's got those new, longer wheel studs, FSN 5307-075-7185 and 5307-075-7186.

But you can get your support to fix your present wrench, FSN 5120-316-9217, so it'll reach far enough to remove and install the inner nuts on those new studs.



IT'S DETERGENT ALL RIGHT

Next time one of your fellow mechanics wants to know if OE-10, -30, -50 is detergent or not—tell him yes. The title of mil spec MIL-L-2104B is: "Lubricating Oil, Internal Combustion Engine (Heavy Duty)." The Heavy Duty (HD) part means it has a detergent additive, among others.

MAINTENANCE POLICY:

M151 1/4-TON SERIES TRUCK NON-

MAINTENANCE POLICY:

M151 1/4-TON SERIES TRUCK

NON-SUPPLY PARTS

Dear Sergeant J. P. J.,

There's not much you, in organizational maintenance, can do about a lack of replacement parts, except for doing your best preventive maintenance to make all parts last as long as possible.

But there's no reason for your cannibalization point running out of M151 replacement parts. In fact, this system of supplying M151 parts is **required** — by AR 750-2300-11.

This AR established a maintenance and support policy especially for the M151 and all other members of the G838-series ¼-ton truck family.

A carefully controlled system of cannibalization prescribed by this policy is designed to **keep** your can point stocked with replacement parts — even if, as a last resort, serviceable vehicles have to be "washed out" to do it!

More than any other item of Army equipment, your M151 ¼-ton truck depends on cannibalization for many replacement parts. This is not an accident or a slipup in the system — it was planned this way and has to be carried out this way.

TB 750-933-1/4 (Oct 66), pages 127-128, describes the M151 maintenance and support policy in detail. The TB points out that the ¼-ton military-type truck is the nearest thing to a vehicular throw-away item the Army has.

Since the M151 is a PEMA (free issue) item, replacement of "worn out" or **"washed out"** vehicles does not put a financial burden on your command. A new one not only supports the fleet but steadily and automatically updates the fleet with the latest, improved production models.

Efforts to stretch the life of an M151, beyond what's reasonable and practical, just backfire in the long run, upsetting the special M151 maintenance and support policy. It's the old story of "penny wise and pound foolish."

Your bone yard must carry an adequate supply of M151 replacement parts — it's a command responsibility.

Half-Mast

SUPPLY PARTS

Dear Sergeant J. P. J.,

There's not much you, in organizational maintenance, can do about a lack of replacement parts, except for doing your best preventive maintenance to make all parts last as long as possible.

But there's no reason for your cannibalization point running out of M151 replacement parts. In fact, this system of supplying M151 parts is **required**—by AR 750-2300-11.

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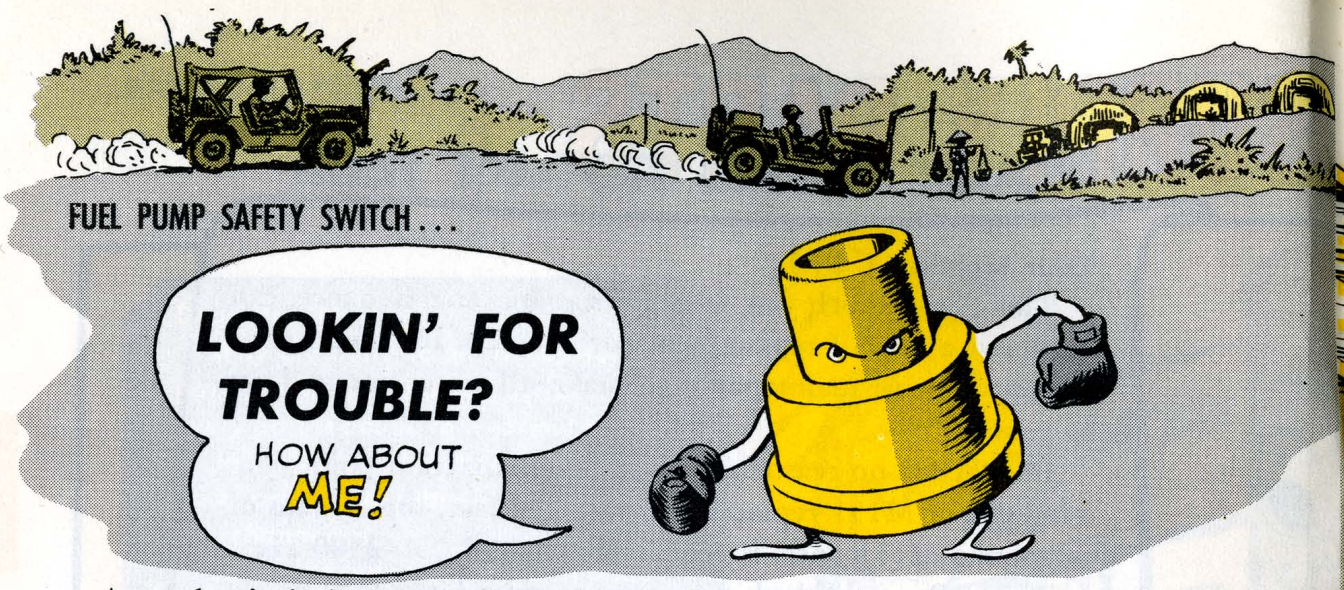
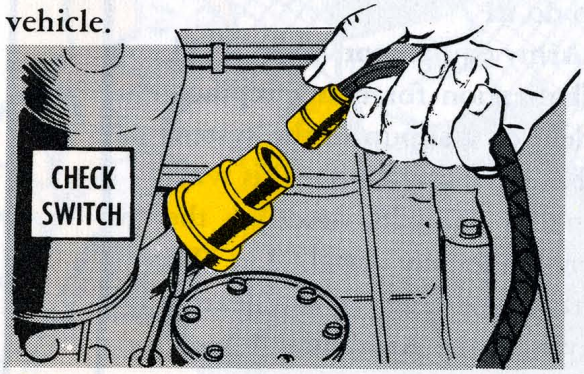


A mechanic isn't necessarily trying to pick a fight when he's lookin' for trouble. He may just be trying to figure out why the fuel pump suddenly quits puttin' out in an M151 ¼-ton truck, M718 ambulance or other G838-series vehicle.



His troubleshooting includes a check of the fuel pump safety switch. This switch cuts off power to the fuel pump if the engine oil pressure falls too low. A drop in oil pressure could mean serious trouble in the engine—and even worse trouble if the engine keeps running. That's why the safety switch.

But maybe the safety switch is giving out a false alarm. Maybe it's the switch that's on the fritz—not the engine.

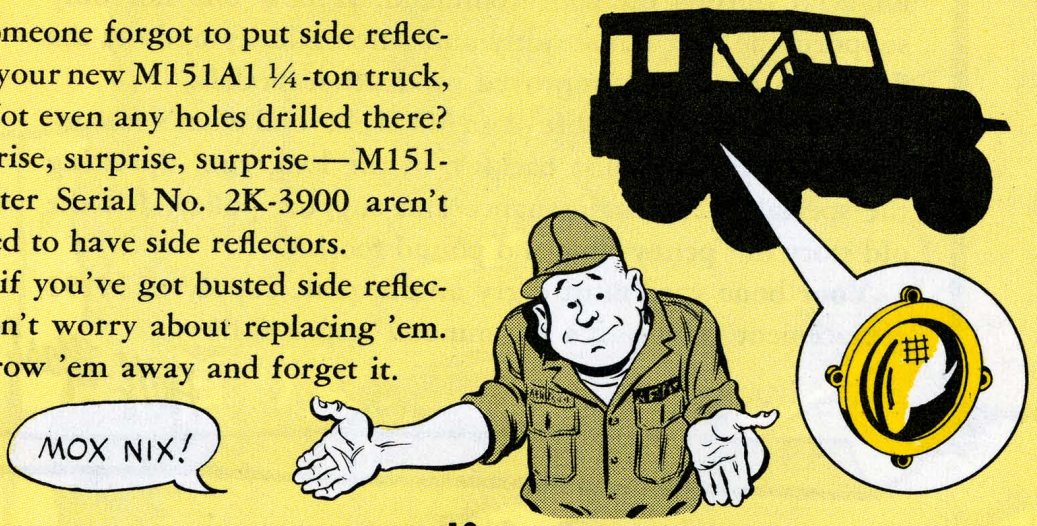
So make sure you're familiar with the safety switch testing rundown on page 98 in TM 9-2320-218-20 (Apr 63).

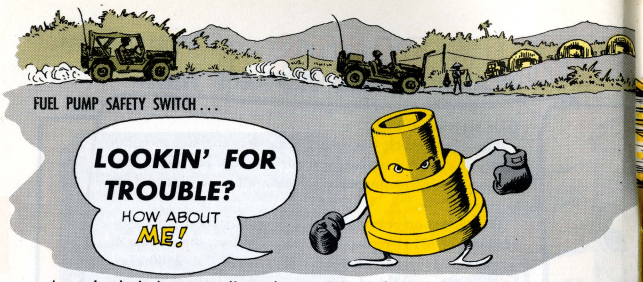
REFLECTS CHANGE

So someone forgot to put side reflectors on your new M151A1 ¼-ton truck, huh? Not even any holes drilled there?

Surprise, surprise, surprise—M151-A1's after Serial No. 2K-3900 aren't supposed to have side reflectors.

And if you've got busted side reflectors, don't worry about replacing 'em. Just throw 'em away and forget it.





FUEL PUMP SAFETY SWITCH...

LOOKIN' FOR TROUBLE?

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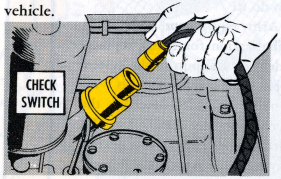

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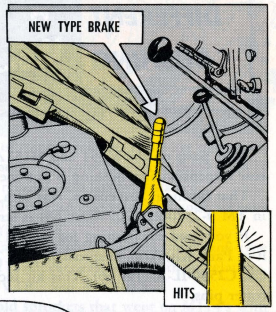
ONLY HALF-SAFE?

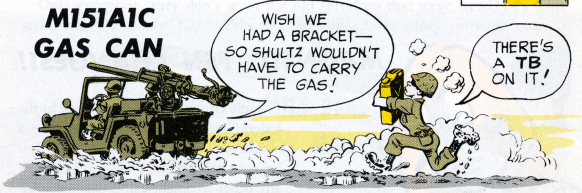
If it hasn't happened . . . a word to the wise.

All M151A1-series ¼-ton trucks made after Serial No. 2K 4754 have a new type parking brake handle—one that works on a cam to release the brakes instead of a push button and ratchet, like with the older kind. And when the driver's seat is tilted forward, the frame hits the latest design handle and releases the brake.

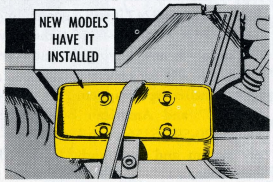
Could be embarrassing . . . so play it smart. Put your vehicle in gear when you park it—and before you climb out and arch the seat forward.



M151A1C GAS CAN



Instructions for mounting the 5-gal gas can and bracket on early-model M151A1C weapons carriers are on pages 183-186 in TB 750-933-1/3 (Jul 66). The location is on the left side engine cowl.



You'll have to fabricate some of the parts, using the bracket itself as a template for making a spacer plate and a backing plate.

That TB has been superseded by a later issue, but hold onto those instructions; it's the only place you'll find 'em. Newer M151A1C's come with the bracket hardware already installed.

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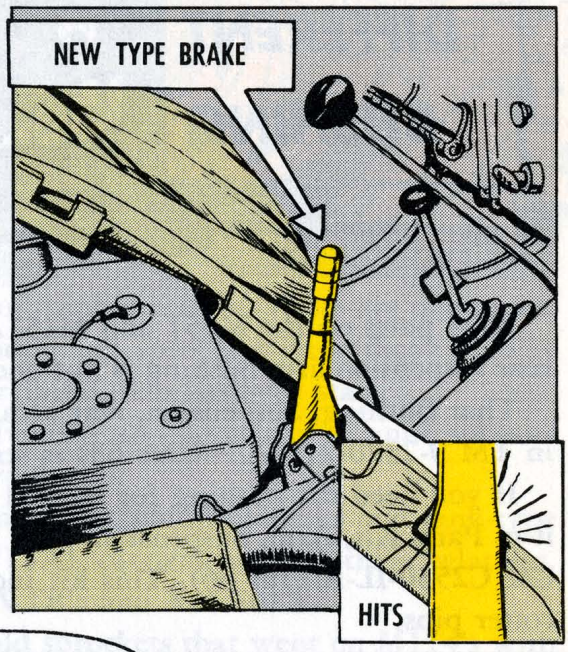

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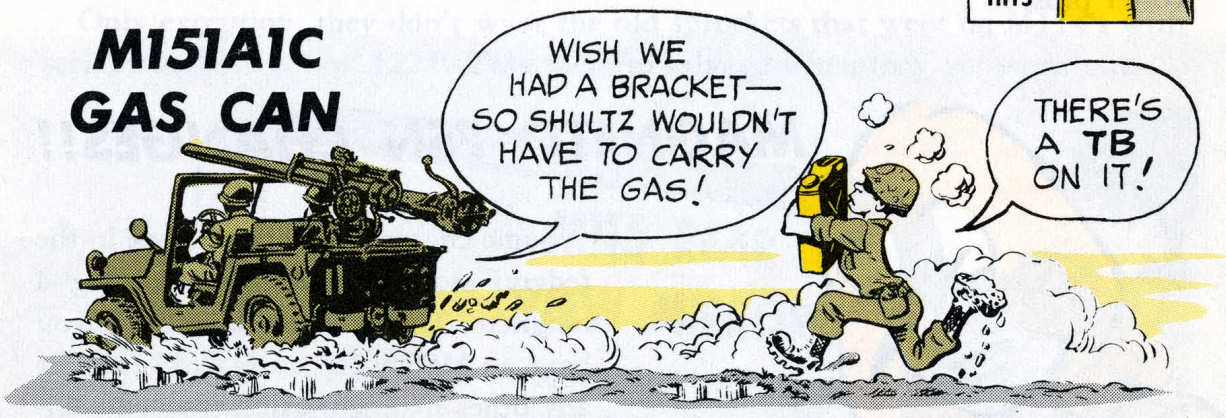

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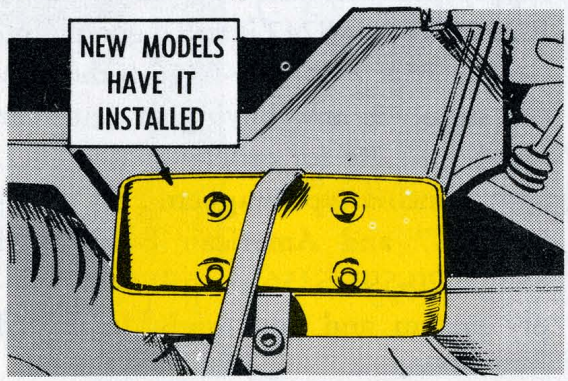

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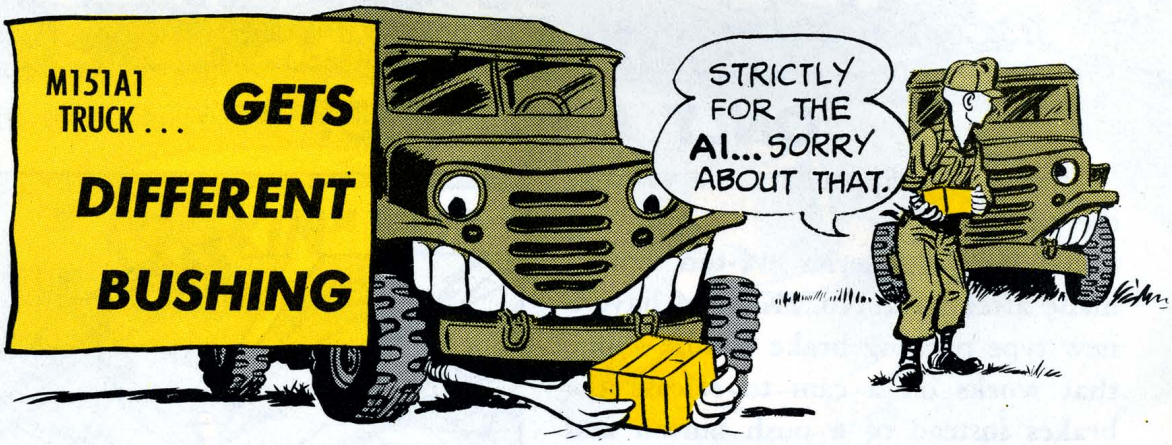


Most parts on the M151 and M151A1 ¼-ton trucks are the same—but the rear suspension arm bushing is **not** one of 'em.

That Bushing, Suspension, rear arm, FSN 5340-678-1751, you see on page 61 in TM 9-2320-218-20P (Dec 63) is strictly for the M151.

If you need the bushing for the M151A1 (or M151A1C or M718), you get it in Parts Kit, Arm, Suspension, FSN 2530-979-8898, listed on page 5-246, Fed Cat C2530-IL-A (Jul 66). This kit includes 2 bushings, 2 bolts, 2 nuts and 2 cotter pins.

MAGNETO FSN CHANGES!!

Some changes have been made in the federal stock number for ordering a magneto. This is handy to know if you have an M88 VTR, an M48A2 tank or any other magneto-using tracked vehicle. FSN 2920-640-7743 and FSN 2920-740-3411 listed in some of the early supply manuals are now out, O-U-T. FSN 2920-529-8247 is still a good number but FSN 2920-593-6456 is the only one supply is now buying so that's the number to use for ordering. However, both Scintilla type magneto FSN 2920-529-8247 and American Bosch type FSN 2920-593-6456 are still in the supply system and you might be issued either one.

SAVE SPROCKETS AND ROADWHEELS

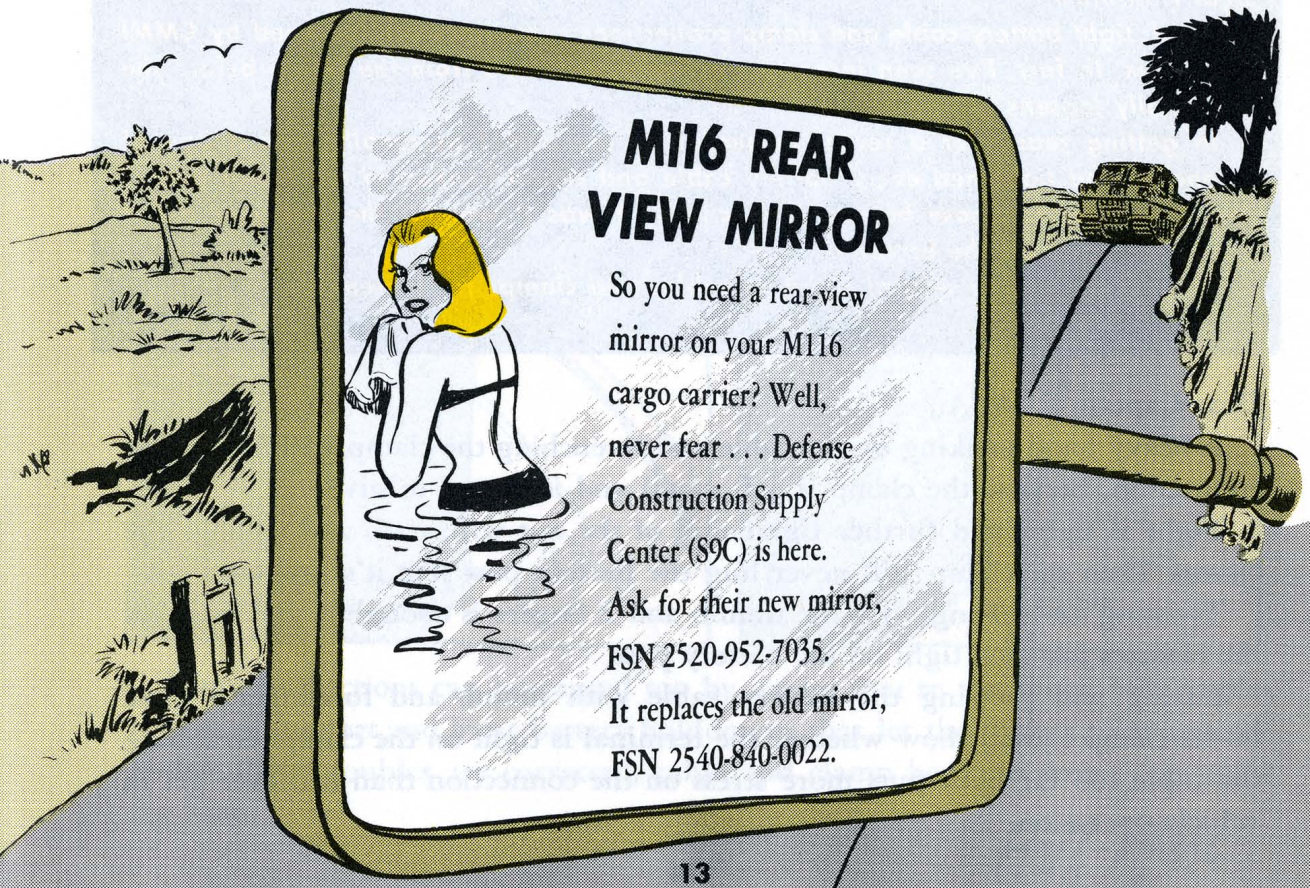
Listen up on this if you have any kind of combat vehicle. There are new rules.

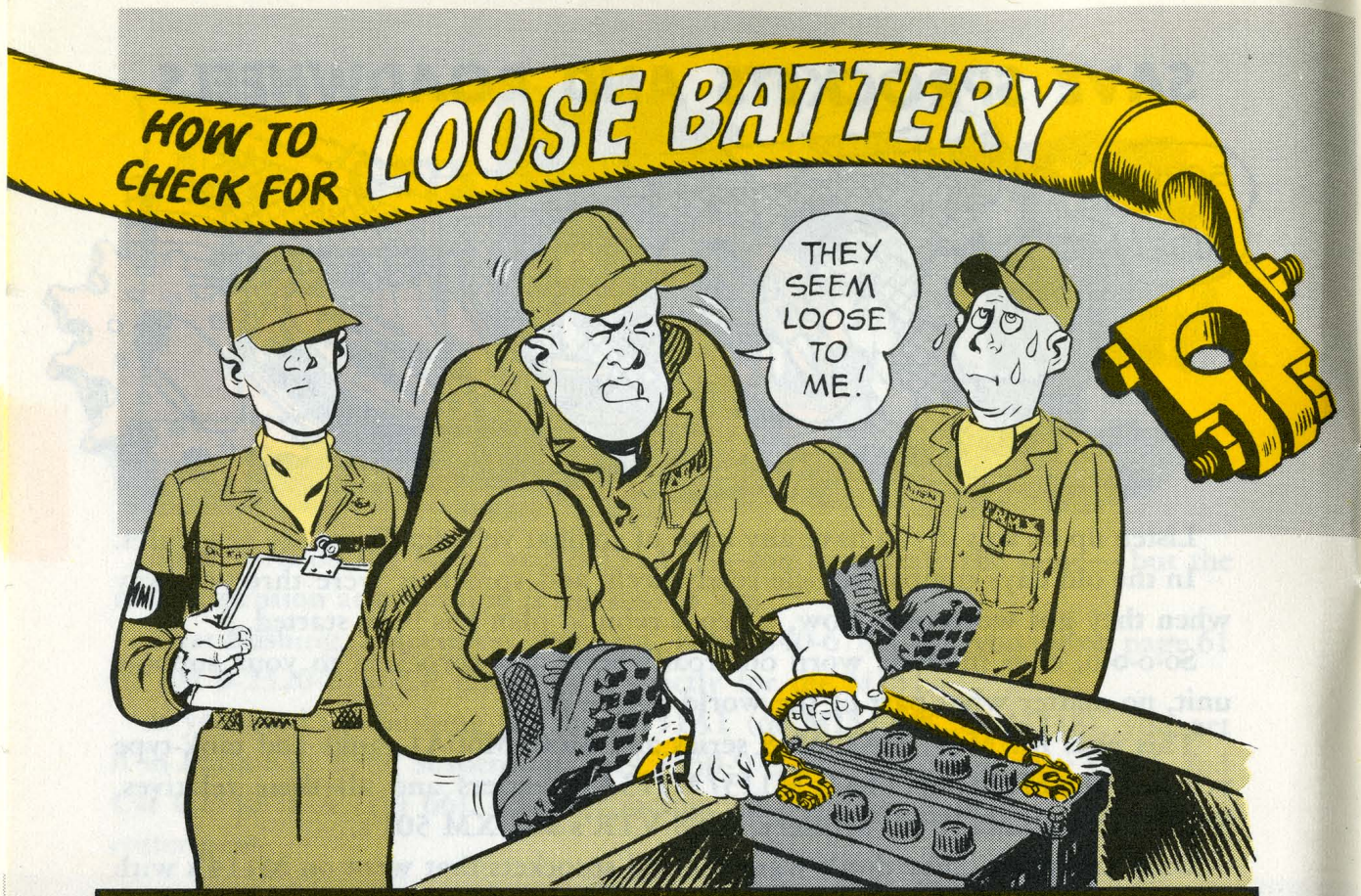
In the old days combat vehicle roadwheels and sprockets were thrown away when they got worn out. Now, a depot rebuild plan has been started.

So-o-o-o, turn in those worn out roadwheels and sprockets to your support unit, no matter what part of the world you're in.

This goes for M41, M42, M48 series and M60/M60A1 tanks and tank-type vehicles, the M114/M114A1, M113/M113A1 carriers and all their relatives, M107 through M110 SP artillery, M88 VTR's and XM 501's.

Only exception, they don't want the old sprockets that went on M114's with serial numbers below 1224. Toss them to salvage when they get worn out.





Dear Half-Mast,

Good, tight battery cable and clamp connections sometimes are loosened by CMMI inspectors. In fact, I've seen inspectors actually strip lead from the clamp before the nut finally loosens on the bolt.

In getting ready for a recent inspection of my unit, I personally took a pair of wrenches and tightened every battery cable and clamp hookup in my motor pool. I lost 2 vehicles for loose battery connections. It was a wonder the inspector didn't break the ppsts off the batteries.

What is the proper way of checking cables and clamps for looseness?

CPT R. A. A.

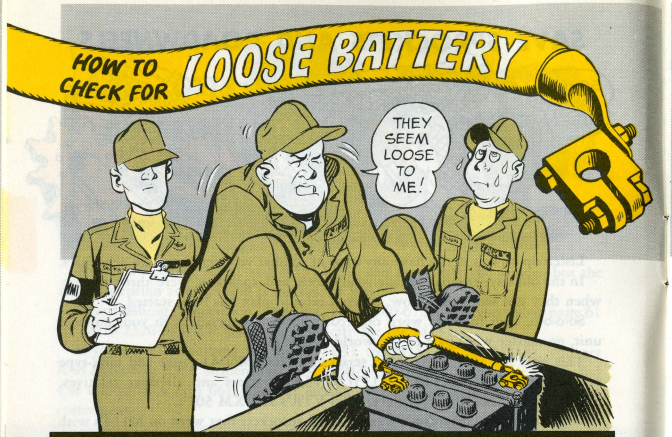
Dear Captain R. A. A.,

A heavy hand yanking on the cable and wrenching the clamp will loosen any connection, because the clamp is soft metal and is bound to give.

Tight is tight, and further tightening of the nut will mash and damage the clamp. Then the clamp will never hug the battery post like it's supposed to.

Twisting and lifting with the thumb and 2 fingers is enough to tell whether the clamp's fastened tight on the battery post.

Lifting and pressing the battery cable with thumb and forefinger — close to the clamp — will show whether the terminal is tight on the clamp. Grabbing the cable too far back puts more stress on the connection than it'll ever get in vehicle operation.



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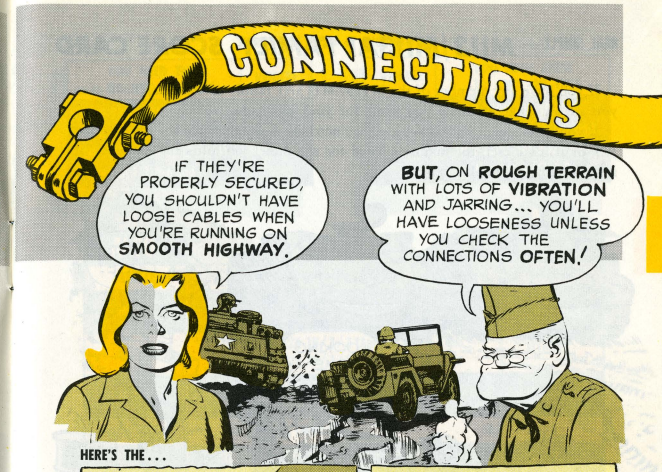

Loose connections can be caused too by cables that're too short, long cables that need support and loose battery holddowns that let the battery slide around. Unless these troubles are corrected, cable and clamp hookups won't stay tight for long.

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REAL SIMPLE— *M113/M113A1 FAMILY SCORE CARD*

If you have any member of the M113/M113A1 family of vehicles, this'll clue you in on what manuals you need for your particular vehicle.

If you have any other gas vehicle, you need the manuals listed for the gasoline job, or if it's diesel, the manuals listed for the diesel job, **plus** the manuals (if any) for that particular vehicle.

LUBE ORDERS

M113, M577, M106, M132	LO 9-2300-224-12 (May 63) w/Ch 1-2
M113A1, M577A1, M106A1, M132A1, M125A1	LO 9-2300 224-12/2 (Oct 65)
M548	LO 9-2300-224-12/2/7 (Nov 65)
XM474E2	LO 9-2300-224-10/1 (Oct 62)

ESC

M113	TM 9-2300-224-ESC/1	M106A1	TM 9-2300-224-ESC/7, w/Ch 1
M106	TM 9-2300-224-ESC/2	M577A1	TM 9-2300-224-ESC/8,
M577	TM 9-2300-224-ESC/3	M125A1	TM 9-2300-224-ESC/10,
M132	TM 9-2300-224-ESC/4	M132A1	TM 9-2300-224-ESC/9
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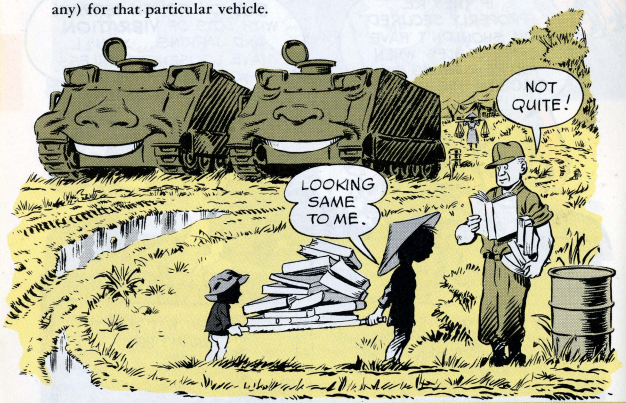

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HERE'S THE WAY IT WORKS OUT:

YOU NEED THESE -10 AND -20 TM'S	VEHICLE
TM 9-2300-224-10 (Nov 61) w/Ch 2-3, 5-6 TM 9-2300-224-20 (Dec. 61) w/Ch 1-3, 5-6 and 8	M113 (gasoline)

VEHICLE	YOU NEED THESE -10 AND -20 TM'S
M113A1 (diesel)	TM 9-2300-224-10/2/1 (Sep 64) w/Ch 1-5 and TM 9-2300-224-20/2/1 (Nov 64) w/Ch 1-3

AND ALSO VEHICLE	YOU NEED THIS	AND ALSO VEHICLE
M577	TM 9-2300-224-10/3/2 (Apr 65) w/Ch 1 and TM 9-2300-224-20/3/2 (Jun 65)	M577A1
M106	TM 9-2300-224-10/3/3 (Apr 65) w/Ch 1 and TM 9-2300-224-20/3/3 (Jun 65) w/Ch 1	M106A1
M132	TM 9-2300-224-10/3/4 (Apr 65) and TM 9-2300-224-20/3/4 (Apr 65)	M132A1
XM474E2	The gasoline TM's only	
	TM 9-2300-224-10/2/6 (Mar 66) and TM 9-2300-224-20/2/6 (Feb 66)	M125A1
	TM 9-2300-224-10/2/7 (Dec 65) and TM 9-2300-224-20/2/7 (Feb 66)	M548

PARTS MANUALS

FOR THIS VEHICLE	YOU NEED THIS PART OF -20P/3 TM
M113, M113A1	Part 1 only
M577, M577A1	Part 1 and Part 2
M106, M106A1	Part 1 and Part 3
M132, M132A1	Part 1 and Part 4
XM474E2	Part 1 and Part 5
M125A1	Part 1 and Part 6
M548	Part 1 and Part 7

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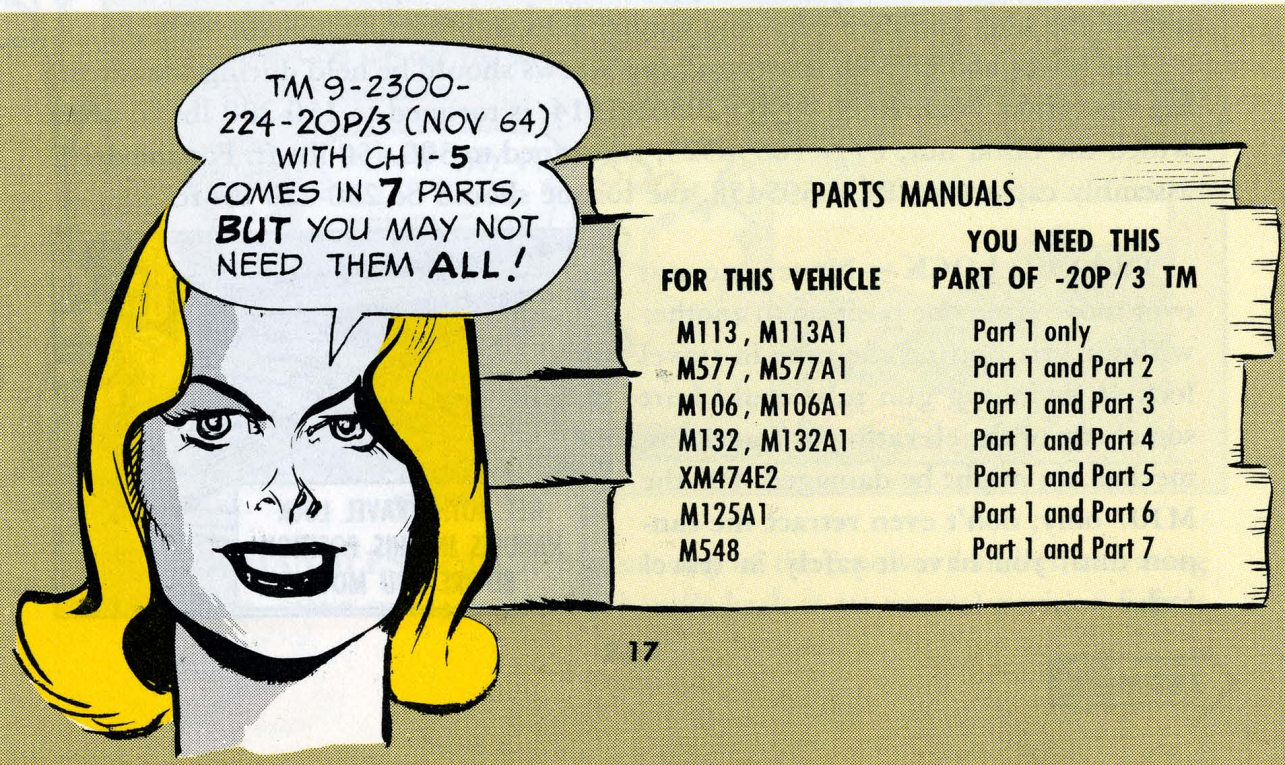


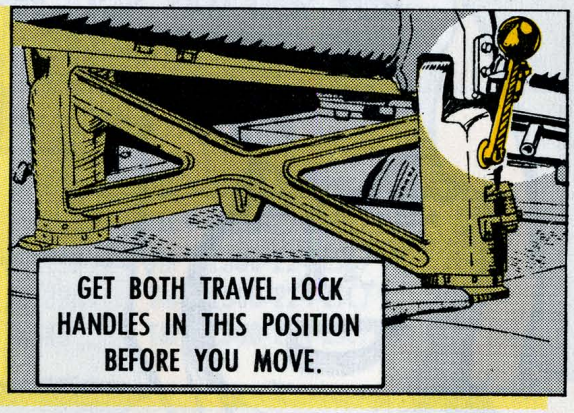
M107/M110 ARTILLERY

TRAVERSING FINAL DRIVE—The 2 blind nuts on the traversing final drive never seem to move on Stateside guns but In-Country guns get fired so much these nuts can work loose.

Loose nuts mean platform wobble and poor shooting, so check 'em out. They're on the left hand side in the gun well. If the nuts are loose or the tabs on the lock washers not bent in, call your support to fix 'em for you. They know how to torque the nuts and then bend the washer tabs into the slots on the nuts.

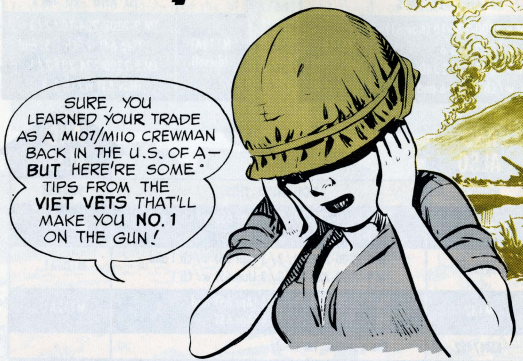
The lower end of both shafts and cap screws should be held during the torquing operation. Nut, P/N 96906-20365-1614, is torqued to 150-200 lbs-ft, after which the blind nut, P/N 10898323, is torqued to 300-450 lbs-ft. For the drive assembly cap screw, P/N 595458, the torque should be 200-220 lbs-ft.

TRAVEL LOCK—Never, no not **ever** move from one position to another without first putting the tube in travel lock. A swinging gun tube could hurt somebody or the elevating or traversing mechanism might be damaged. For the M107 only, don't even retract the cannon until you have it safely in travel lock.



M107/M110

ARTILLERY SHUFFLE

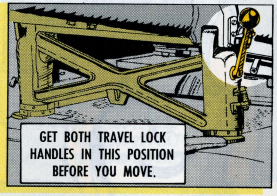


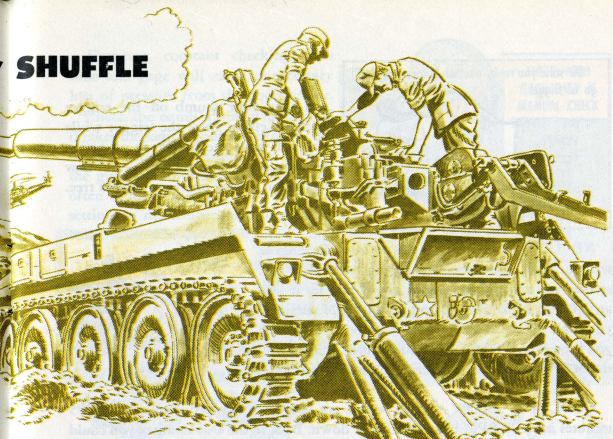
TRAVERSING FINAL DRIVE—The 2 blind nuts on the traversing final drive never seem to move on Stateside guns but In-Country guns get fired so much these nuts can work loose.

Loose nuts mean platform wobble and poor shooting, so check 'em out. They're on the left hand side in the gun well. If the nuts are loose or the tabs on the lock washers not bent in, call your support to fix 'em for you. They know how to torque the nuts and then bend the washer tabs into the slots on the nuts.

The lower end of both shafts and cap screws should be held during the torquing operation. Nut, P/N 96906-20365-1614, is torqued to 150-200 lbs-ft, after which the blind nut, P/N 10898323, is torqued to 300-450 lbs-ft. For the drive assembly cap screw, P/N 595458, the torque should be 200-220 lbs-ft.

TRAVEL LOCK—Never, no not **ever** move from one position to another without first putting the tube in travel lock. A swinging gun tube could hurt somebody or the elevating or traversing mechanism might be damaged. For the M107 only, don't even retract the cannon until you have it safely in travel lock.

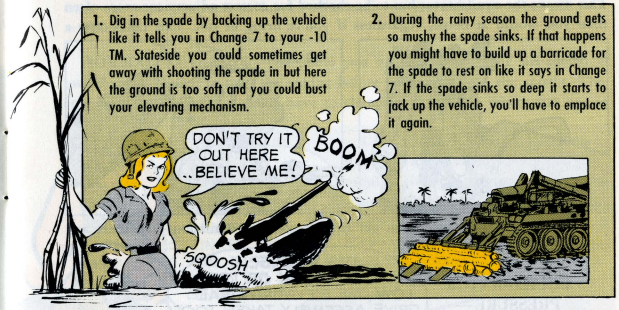




SPADE EMPLACEMENT—If you stay in this China Sea paradise long enough you'll get to lay your gun on every single one of the 6400 mils. That means a lot more spade emplacement than you're used to, so here are 2 things to watch. . . .

1. Dig in the spade by backing up the vehicle like it tells you in Change 7 to your -10 TM. Stateside you could sometimes get away with shooting the spade in but here the ground is too soft and you could bust your elevating mechanism.

2. During the rainy season the ground gets so mushy the spade sinks. If that happens you might have to build up a barricade for the spade to rest on like it says in Change 7. If the spade sinks so deep it starts to jack up the vehicle, you'll have to emplace it again.



POWER HANDLES—When you use any of the 3 power handles, elevating or traversing, make sure you get the handle back to its neutral position before

MORE

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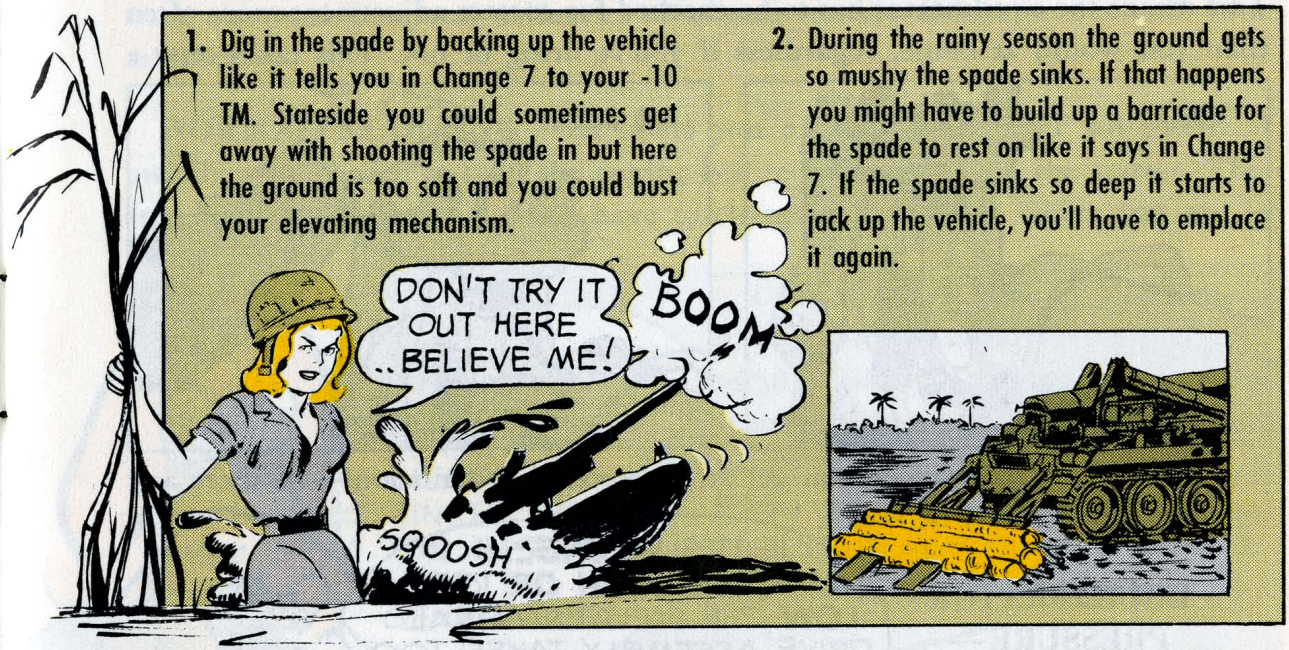

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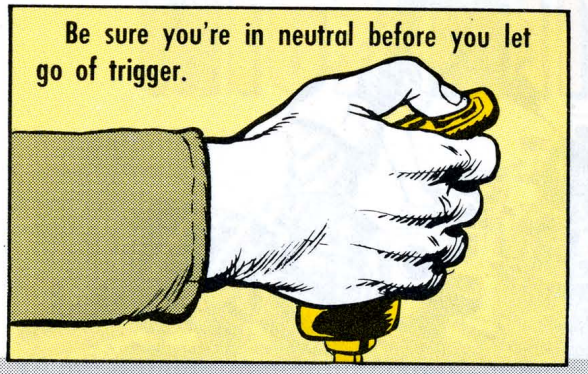
P.S. MORE

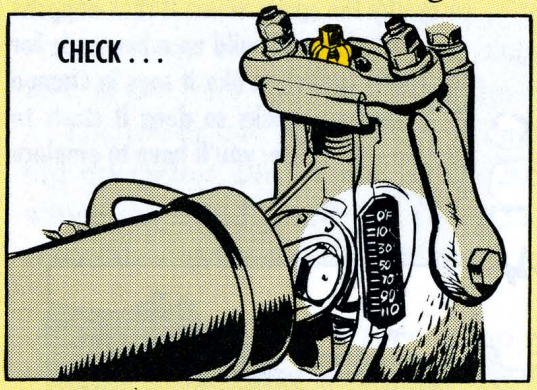


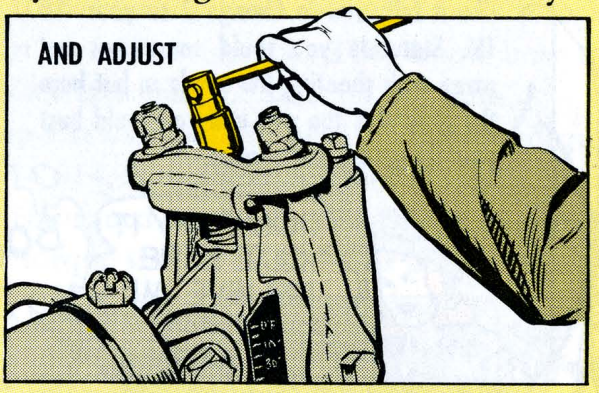
you take your thumb off the trigger switch. Letting go of the trigger while you still have the handle in an action position beats up the gears—and new gears don't grow on every banana tree.

NO LOAD ENGINE—If you run the engine without load, when you're charging batteries, f'rinstance, you shorten the engine life if you let it idle at 550-600 RPM. Step it up to 1200 RPM. Besides, you can't get any real charge in your batteries unless you keep it at 1200 for 15 to 20 minutes. Remember, the M107/M110 has a generator, not an alternator.

COOL IT . . . SLOW—Once you've got your engine pretty hot, run it for 5 minutes at 1200 RPM before you shut down. Back in the Old Country you could sometimes get away not doing this, but here engines get so hot they've got to have this cooling-off period.

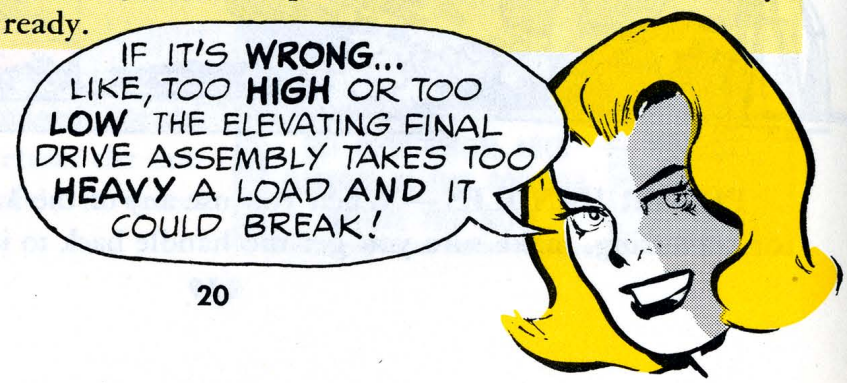
HOT AND COLD—Here in this tropical paradise, temperatures vary widely. This means the equilibrator has to be checked for correct adjustment more often than you would at home, regardless if you're firing or not. This takes only a





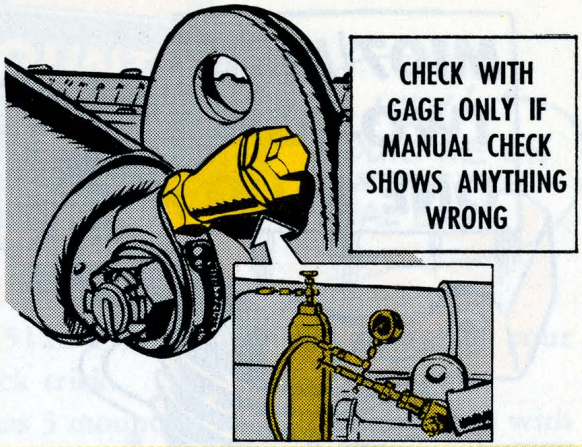
few seconds and then, when you get an unexpected fire mission—(is there any other kind?)—you'll be ready.

EQUILIBRATOR PRESSURE—

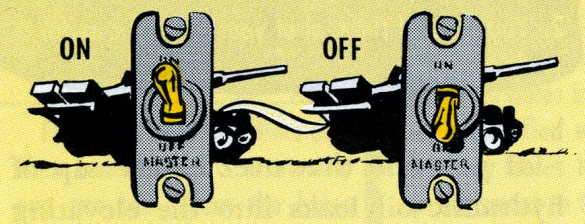


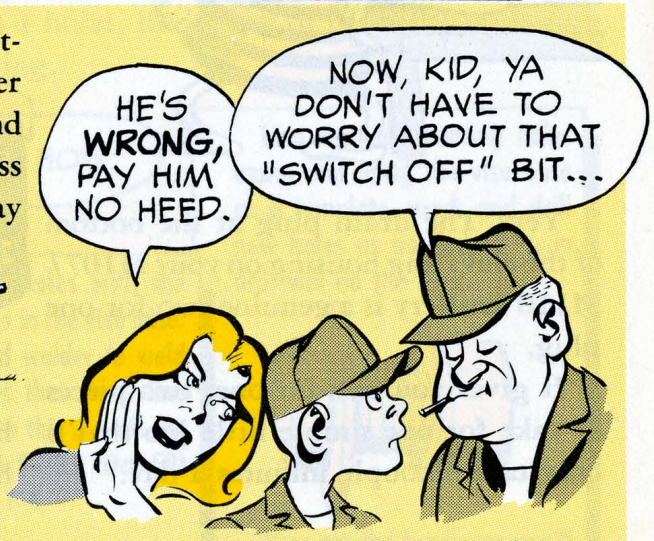
However, constant checking with tube and gage will cause unnecessary loss of pressure from the equilibrator.

Check the equilibrator manually. If it takes the same amount of effort in the central ranges to elevate or to depress the gun, the adjustment is OK. Check often to make sure you have the right setting on the temperature adjustment scale.

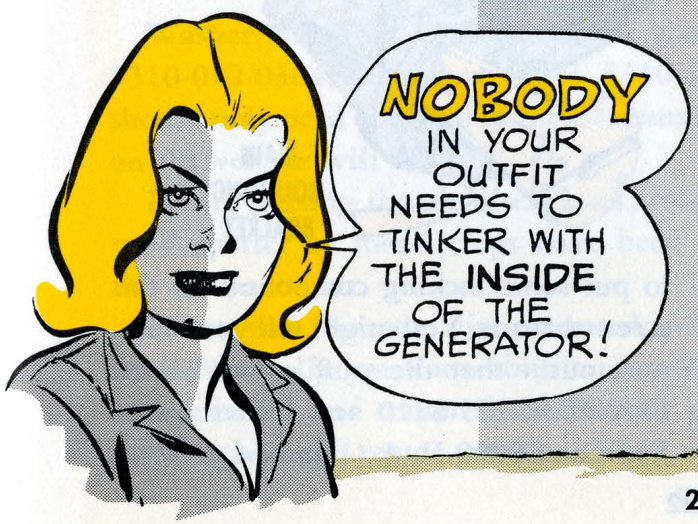


SLAVE STARTING—Before starting to slave, make sure the master switch is OFF in the slaved vehicle and ON in the slaving vehicle. Regardless of what some shade-tree mechanic may have told you, unless the slaved vehicle master switch is OFF you are likely to burn out your generator or master relay and you are almost sure to ruin your rectifier.





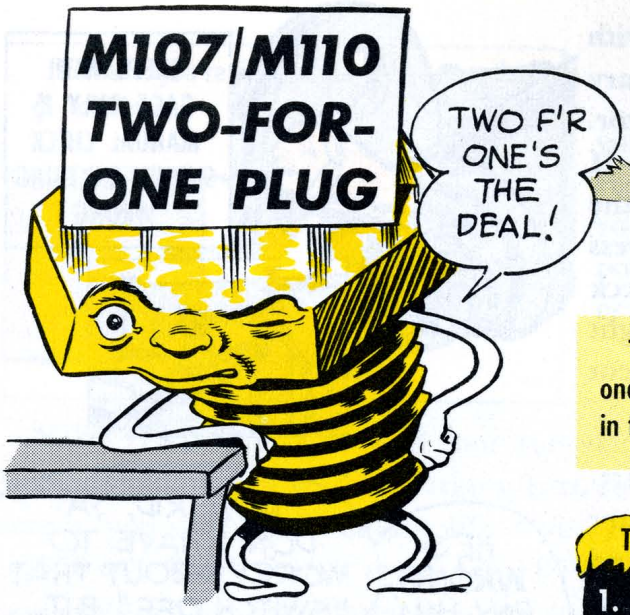
NORMAL STARTING—At home you always turned OFF all electrical switches not needed to start the engine before you pressed on the starter. This is a good habit and you won't have to change it no matter where you are in the world.

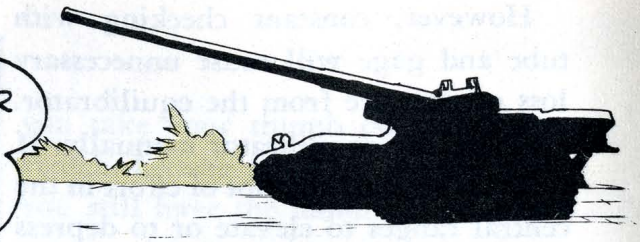


GENERATOR REGULATOR—As a crewman you've got enough on your mind without having to worry about generator regulators. Let the battery mechanic adjust for 28 volts like it shows in fig 86b of TM 9-2300-216-20 (Jun 62). If he can't cure the trouble, he'll replace the entire regulator.

END

M107/M110 TWO-FOR-ONE PLUG





THE JOB — Screw out the plug, wait a few seconds, and then screw it back in again. (A little GAA in the threads will make the job even easier.)

THE CAKE —

1. Water that could rust the elevating mechanism gets drained off.
2. You know if the seal at your hydraulic motor is doing its job.

Yep! The drain plug at the bottom of the elevating housing on your M107/M110 artillery is a genuine two-for-one plug.

It gives you two-for-one, two pieces of cake for one simple little job that'll only take a couple minutes a day.

If you find that over half a cup of hydraulic oil leaks into the elevating housing in a day have the seal repaired.

ON THE LEVEL

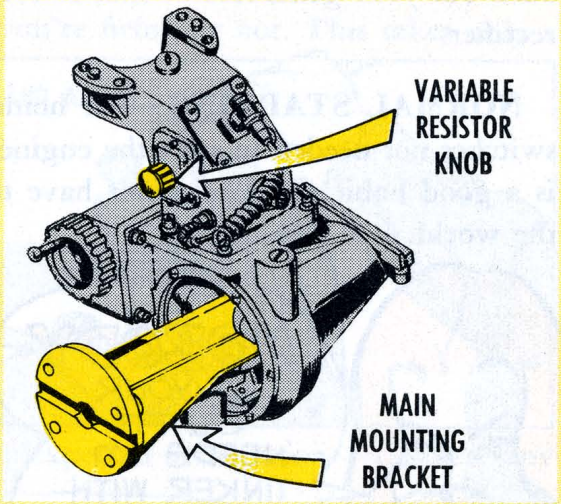
What's that?

You've got elevation counter trouble with the M137 telescope mount on your M107 SP 175-mm gun. Or maybe your weapon is the M110 SP 8-in howitzer and you have the same problem — the counter doesn't read zero (0) when the shooter is at zero (0) mils elevation.

Could be the elevation level vial is out of adjustment . . . the elevation counter is worn or shot . . . or the main mounting bracket is twisted.

Call in your support people and ask them to come up with the answer.

Your DSU also has the answer if the setscrew won't keep the variable resistor knob from vibrating loose. That's

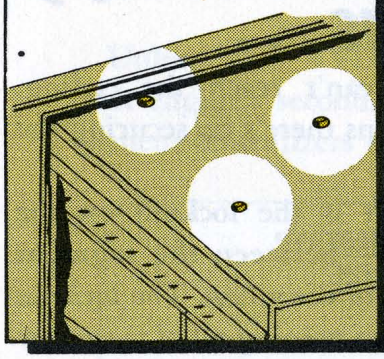


to put some locking compound on the screw threads. You might tell your support outfit that the stuff comes under FSN 8030-275-8110 and shows up in Fed Cat C8000-IL-A (1 Jan 66).

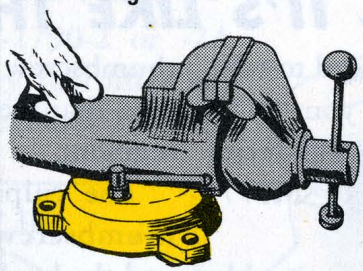
Mounting the machinist's vise, FSN 5120-293-1439, on the fender of your M578 recovery vehicle can be a real slick trick.

Nothing to it if the base of the vise has 3 mounting holes that marry up with the 3 holes in the fender. But if it has 4 holes, like many of them do, mounting it may take a little fiddling and faddling.

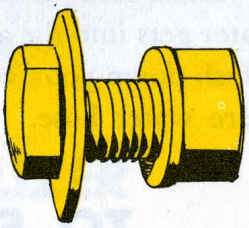
First take both air filters out. Then remove the 3 screws so you can see where the holes are.



Line up the holes with the mounting holes in the vise base. Get a qualified welder to weld shut any holes that don't line up. No sweat to this . . . all the dope is in TM 9-237 (Oct 58) with Changes 1-4.



Line up the mounting holes again and using the vise base as a template, mark and drill new holes as needed. A 9/16-in drill will do the trick.



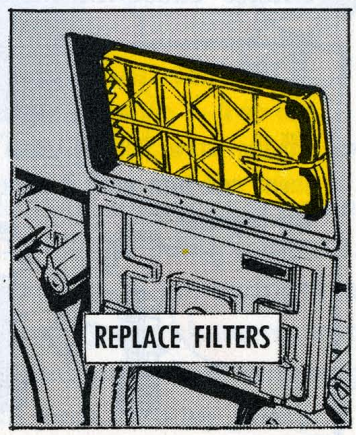
Now get the hardware you'll need:

Screw, 7/16 x 1 3/4, FSN 5305-725-4187. You'll need 4 of these because the 3 screws mounted on the vehicle are all too short.

Washer, flat, FSN 5310-809-5998; washer, lock, FSN 5310-012-0384; nut, hex, FSN 5310-685-2246. You should only need one each of these because the 3 mounted on the vehicle will fit.

Before putting the air filters back, make sure that all weld spatter or metal chips have been cleaned out of the compartment.

When you have the vise mounted, put the air filters back. Naturally, you know the filter brackets must always face inboard and centered and the air cleaner handles must lock in the center groove.



M88 BLOWER MOTOR MAINTENANCE

On your M88 tank recovery vehicle the engine generator blower motor is made to blow air. It does a real good job on this.

What it isn't made to do is blow water. If a lot of water gets down the air exhaust, the motor runs as noisy as a rock 'n' roll singer and then quits altogether. This leaves you with a deadlined vehicle and plenty of trouble.

Water gets into the air exhaust when you slosh down your vehicle with high pressure water hose.

You can prevent this by wrapping the outlet with green tape or old rags before you hose down the vehicle.

'Course you'll have to shut down the engine before you do this and remember to take off the tape or rags before you start again. But it is sure worth it to keep that blower motor in operation.

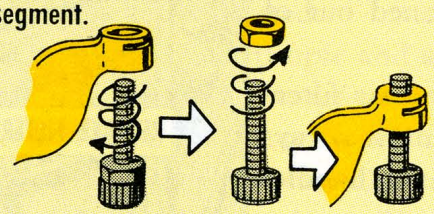
TO SEE, IT'S LIKE THIS . . .

A few minutes is all you need to take care of a touchy deal with your M19 periscope — if it's in the M113-series armored personnel carrier or M577-series command post carrier.

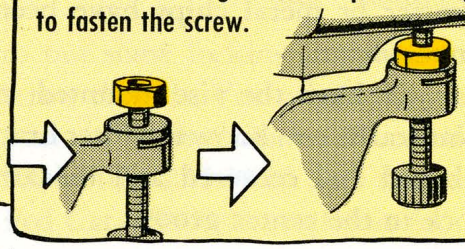
Seems the elevation lock assembly won't hold the 'scope in place in the vehicles 'cause the threaded part of the thumbscrew can't reach the ceiling. And that means there's no securing the segment.

The culprit is the locknut on the thumbscrew — between the segment and the knob of the screw. The locknut keeps you from turning all of the screw up toward the ceiling.

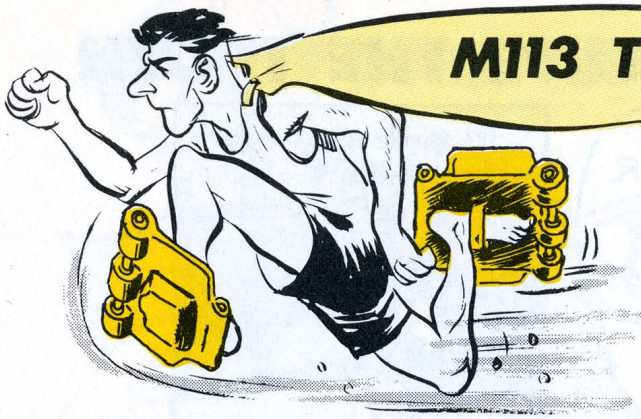
THE CURE: Turn the screw — with the locknut on it — out of the segment. Take the nut off the screw. Put the screw back in the segment and turn until it sticks out the top of the segment.



Then thread the nut on the screw. The job's done when the screw has been tightened to hold the segment in place and the nut has been run down against the top of the segment to fasten the screw.



M113 TRACK SHOE NEWS

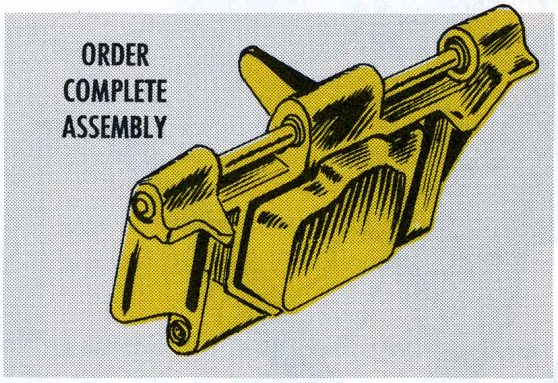


If you have any one of the M113/M113A1 family of vehicles, listen up good because here's some news on shoes to chase the blues.

Turn to page 177 (fig 134) of your TM 9-2300-224-20P/3 (Nov 64) and under Item 1, the complete shoe assembly, jot down FSN 2530-930-2011.

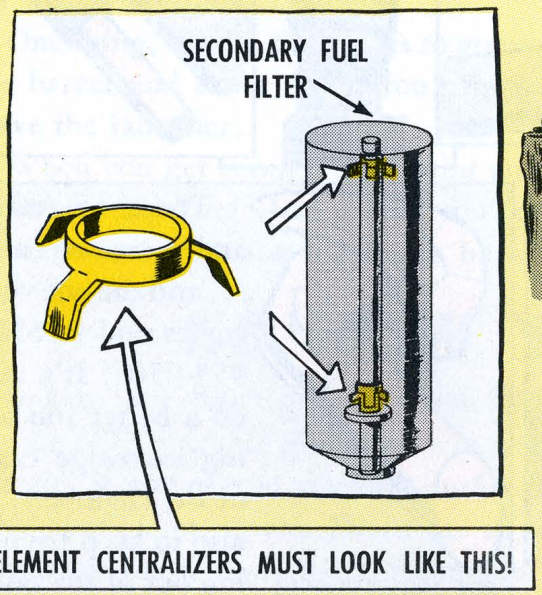
This FSN will get you a package of 8 complete shoes so you no longer need to order 5 component parts every time you want a shoe.

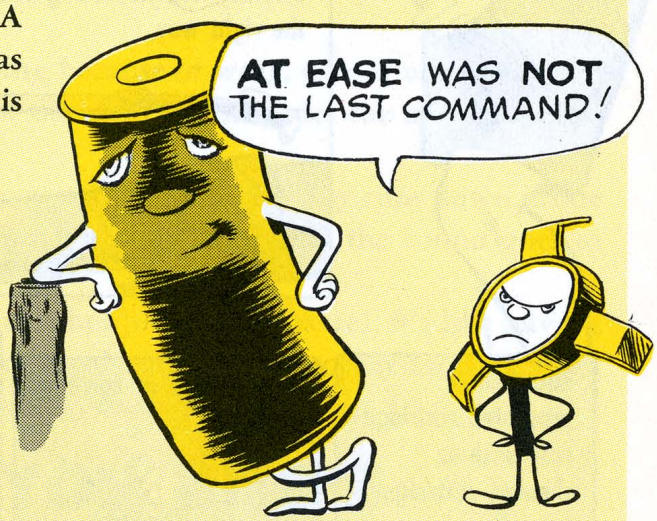
You can still get individual components under their own FSN's except for Item 4, the track shoe. That has been deleted. If you need track shoes, you must order complete shoe assemblies, FSN 2530-930-2011.



ELEMENT CENTRALIZER

Unless your AVDS-1790-2 or -2A tank engine's secondary fuel filter has element centralizers that look like this





. . . pound on your support's door until they apply MWO 9-2815-200-30/6 (Jan 66). These new centralizers are needed to keep your element seated right so contaminated fuel cannot get into and ruin your injector pump.

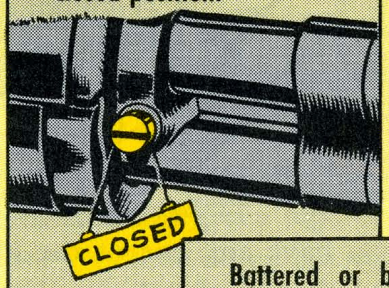
FIREPOWER

M14 RIFLE . . .

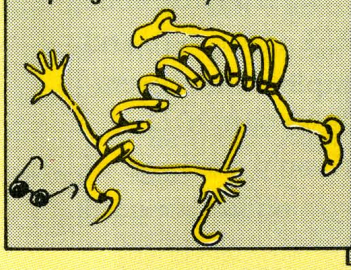
EXTRACTING THE TRUTH

WHEN YOU POP-OFF A ROUND WITH YOUR M14 — BUT :GASP: THE EMPTY CARTRIDGE WON'T EXTRACT :SOB: HERE'S WHAT COULD BE CAUSING IT!!

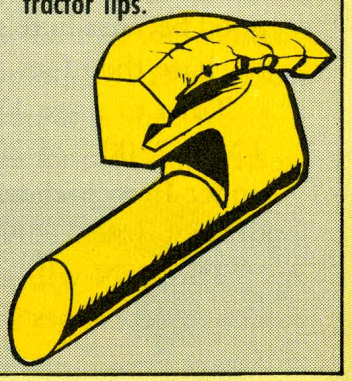
The spindle valve's in the closed position.



Weak, misshapen or stuck extractor plunger and spring assembly.

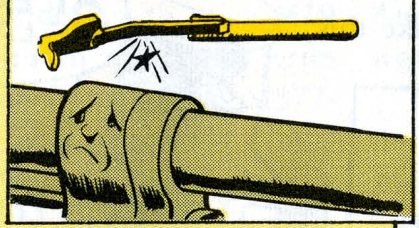


Battered or broken extractor lips.



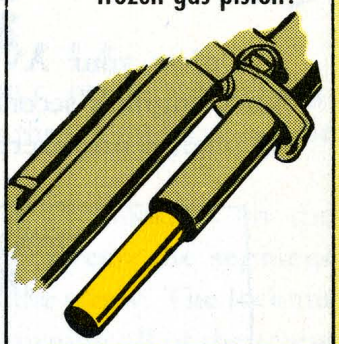
Short recoil that's the fault of . . .

bent operating rod or the gas cylinder lock not being seated the right way,

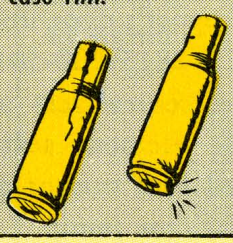


a loose gas cylinder plug,

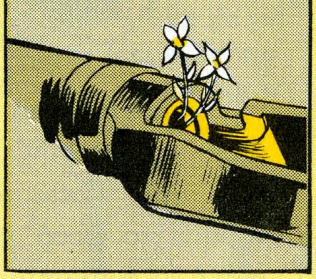
frozen gas piston.

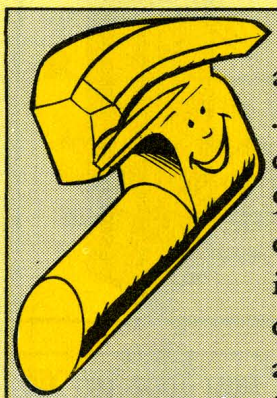


Ruptured or separated cartridge case base or sheared cartridge case rim.



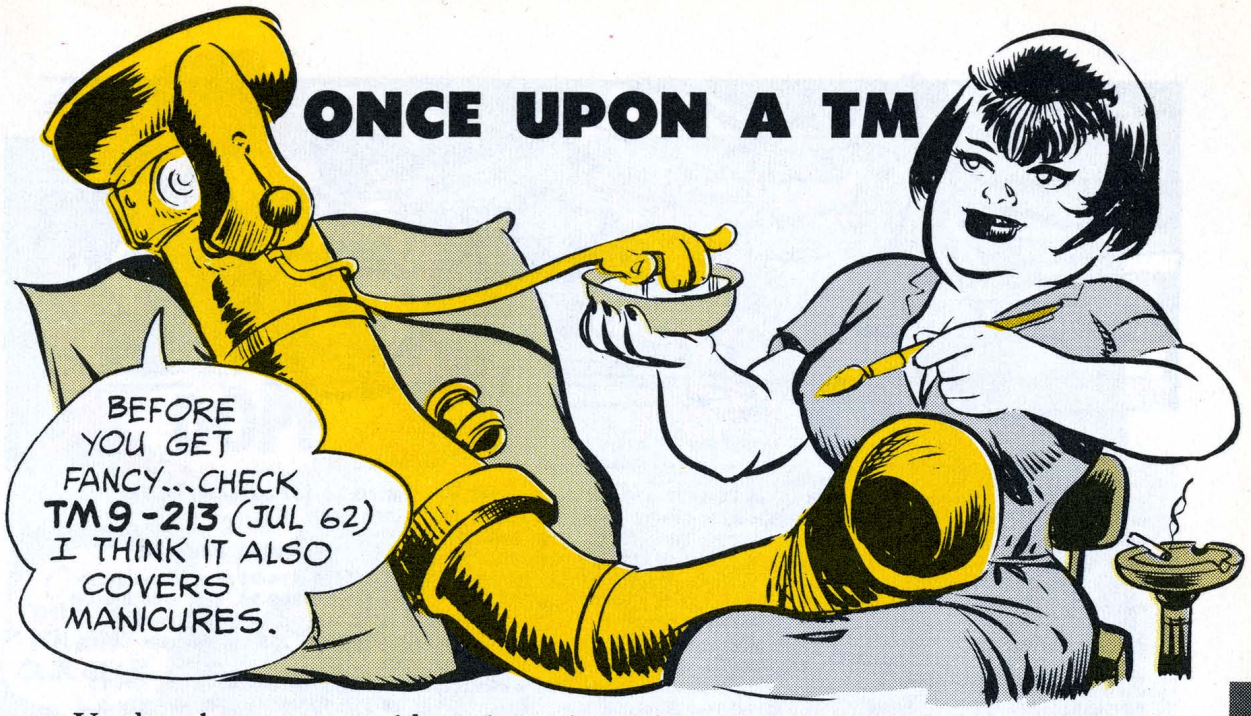
Dirty, pitted or corroded chamber.





FSN 1005-953-9504

There are extractors and there are extractors . . . and the one you want comes under FSN 1005-953-9504. It's made to do a better job of pulling cartridge cases out of the chamber . . . and also to keep from jumping out of the bolt.



Used to be a guy could settle real quick any argument about whether the muzzle deflector and breech guard on the 3.5-in M20A1-series rocket launcher are supposed to be painted or oiled.

He could open TM 9-2002 and read: "Parts of the launcher from which paint has worn off will be painted in accordance with TM 9-2851. Purpose of such painting is to prevent light reflection from worn spots which may become shiny.

That scoop's not in the latest pub on the rocket launcher — TM 9-1055-201-14 (May 64), but it still holds water — except that TM 9-213 (Jul 62) has superseded TM 9-2851.

Repeating . . . any paint that's missing because of wear, tear or unneeded care wants to be replaced with paint — not oil. And this includes the muzzle deflector and breech guard.

One thing, tho . . . the idea is to go easy with the paint. If any runs down inside the barrel and cakes there, you might have some trouble as the round goes to leave the launcher.

When you get enough dirt, paint and other junk in the barrel, it's like having a dent in the thing. And maybe you've heard . . . a lot of rocket launchers are getting dented because of rough handling, so easy does it.

SO NOW YOU KNOW

In case you didn't get the word: No blank firing attachment is authorized for the M73 machine gun. One was developed and tried out, but it didn't work out. So, if any of you training outfits come across one bearing FSN 1005-973-4001, turn it in pronto. Don't use it. It'll cause fast carbon buildup, ejection problems and a short life for components and weapons. Spread the word, too, will you?

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 and Ch 4 (15 Dec 66) and DA Pam 310-6 and Ch 1 (1 Oct 66).

TECHNICAL MANUALS

TM 5-3810-231-20P, Jul, Crawler Crane, Mtd, 60-Ton, DED, Harnischfeger 1125.
TM 5-3810-232-ESC, Jan, Wheel Mtd Crane, 20-Ton, Rough Terrain, DED, American Hoist and Derrick, 2380.
TM 9-1005-281-15, Jan, Subsystem XM27.
TM 9-1345-201-20, Feb, Loading Procedures for Mine Dispersing Subsystem Aircraft XM47 on UH-1B and UH-1D Helicopters.
TM 9-1385-2 (Supplement), Nov, Explosive Ord Disposal.
TM 9-1400-425-12, Jan, Redeye.
TM 9-1430-375-12P/1, Jan, Pershing.
TM 9-4910-477-10, Dec, Tester, Int Comb Eng, Vacuum and Pump Pressure, Century Tool 27-12.
TM 9-4935-467-12P, Jan, Shillelagh.
TM 9-4935-502-14, Jan, Hawk.
TM 10-7310-202-12, Dec, Stove, Gas Burner, 5,500 BTU.
TM 11-1090-268-25P, Jan, Starlight Scope.
TM 11-5410-212-15P, Jan, S-318/G Elec Equip Shelter.
TM 11-5820-607-12, Jan, AN/TRC-132 Radio Term Set.
TM 11-5820-670-12, Dec, CH-34C, CH-47A, CV-2A, CV-2B, CV-7A, O-1E, OH-13H, OH-13E, OH-13G, OH-13S, OH-23D, OH-23D, OH-23G, OV-1A, OV-1B, OV-1C, U-1A, U-6A, U-8F, U-10A, UH-1B, UH-1D, OH-23B, OH-23C, OH-23F.
TM 11-5965-282-15, Dec, MK-1039/G Headset-Microphone Kit.
TM 11-6625-209-25P, Dec, Audio Level Test Panels TS-629C/U, TS-629D/U.
TM 11-6625-682-15, Dec, ME-61/GRC Field Strength Meter.
TM 55-1510-203-20PMD, Feb, U-6.
TM 55-1510-202-20P, Jan, O-1.
TM 55-1520-204-20P, Jan, OH-13.
TM 55-1520-214-20, Jan, OH-6A.
TM 55-1520-214-20P, Jan, OH-6A.
TM 55-1520-214-20PMD, -20PMP, Jan, OH-6A.
TM 55-1520-214-ESC, Jan, OH-6A.
TM 55-6695-200-15, Dec, Fixed and Rotor Wing.
TM 55-8465-206-13, Dec, OV-1.

MODIFICATION WORK ORDERS

MWO 9-1135-200-20/1, Mar, UFD XM41.
MWO 9-1100-300-20/2, Dec, Sergeant.
MWO 9-1410-250-20/14, Feb, Nike-Herc.
MWO 55-1520-209-30/42, Mar, CH-47.
MWO 55-1520-209-34/122, Feb, CH-47.
MWO 55-1520-211-20/30, Feb, UH-1A-1B.
MWO 55-1520-211-30/14, Feb, UH-1A, UH-1B.

TECHNICAL BULLETINS

TB 9-1400-324-25, Jan, Sergeant.
TB 9-2300-209-20, Feb, Rifle Bracket for ¾, 2½, 5 & 10-Ton Trucks.
TB 55-1500-206-20, Mar, UH-1A-1B, UH-1D.
TB 55-1520-206-30/1, Feb, OH-23.
TB 55-1520-214-20/4, Mar, OH-6.
TB 385-101, Jan, Safety Use of Cranes and Similar Equip Near Power Lines.
TB 746-92-2, Nov, Hawk.
TB 750-921-1, Jan, Missile and rocket systems EIR Digest.
TB 750-922-1, Jan, Missile and rocket systems equip EIR Digest.

MISCELLANEOUS

DA Pam 310-2, C2, Jan, Index of Blank Forms.
DA Pam 310-4, C4, Dec, Index of TM's, TB's, SM's, SB's, LO's and MWO's.
LO 5-5420-204-12-1, -2, -3, -4, -5, Feb, Transporter, Mobile Floating Assault Bridge-Ferry Unit, with Detroit Dsl Eng Mod 7083-7200.
LO 5-5420-205-15, Feb, Mobile Floating Assault Bridge-Ferry Unit Components.
LO 9-1440-500-12/1, Nov, Hawk.
LO 9-2320-218-12, Nov, M151, M151A1, M151AC ¼-Ton Truck, M170 Ambulance.
SC 5180-93-CL-AO6, Jan, Tool Kit, Elec Repair, Army Aircraft.
TB AVN 23-65, Jan, Fixed and Rotor Wing.

PINPOINT WRITE-IN ITEMS

Here are the latest pinpoint write-in items:

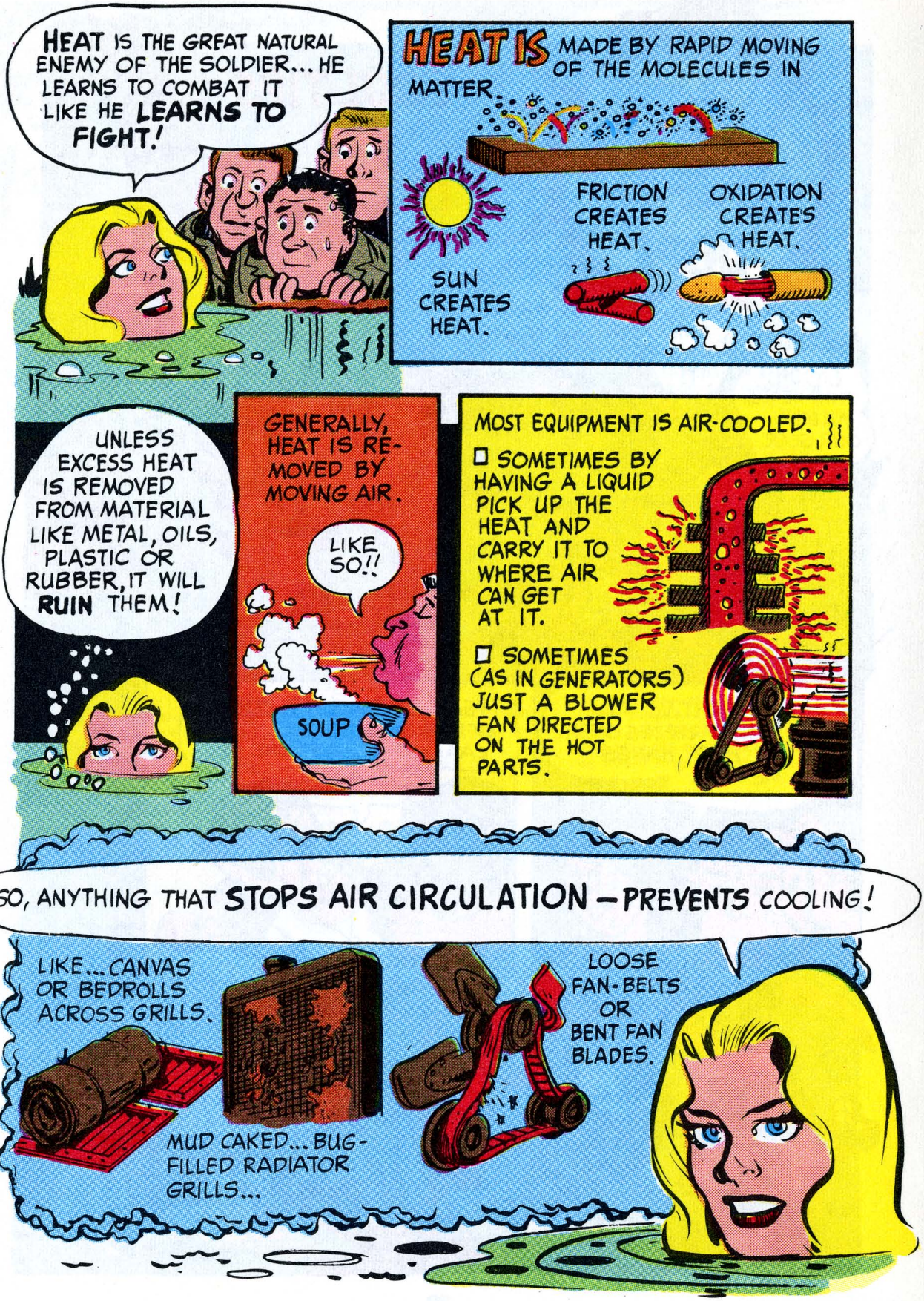
DA Form 12-4
DA Pamphlet 310-7 (Index, of MWO's)

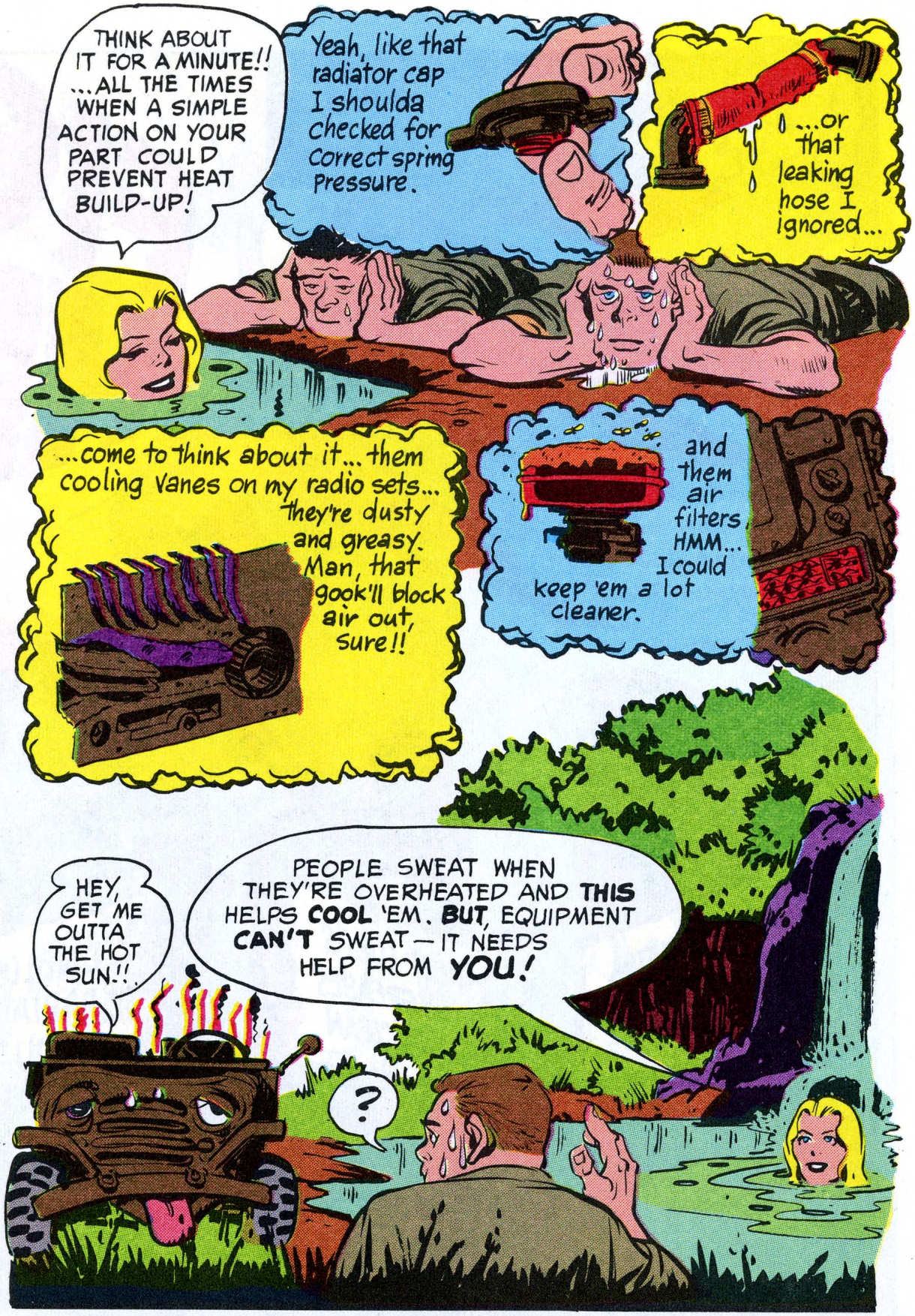
DA Form 12-31
XM156 Mount, Multiarmament Helicopter
U-21A Fixed Wing Aircraft
UH-1C Rotor Wing
AH-1G Rotor Wing

DA Form 12-35
ADC XM127 (MADM)
UFD XM41
AFD
Lance

DA Form 12-37
Trainer, Conduct-of-Fire, XM35
(Launcher, XM41 & Target, XM42)

JOE'S DOPE
COOL TIPS ON FIGHTING HEAT
OOOH, THIS HEAT'S KILLIN' OUR GEAR.
MAN, I'VE HAD IT!
WHEW!
I CAN FIGHT VC TILL DA NANG FREEZES OVER -- BUT, HEAT HANGS ME UP!
YEAH... WELL LET'S COOL OFF IN THIS POOL. CAAAMON... LAST ONE IN IS A...
CONNIE ?
HOLD IT! ...YOU'RE JUST IN TIME FOR SOME TIPS ON FIGHTING HEAT!


HEAT IS THE GREAT NATURAL ENEMY OF THE SOLDIER... HE LEARNS TO COMBAT IT LIKE HE LEARNS TO FIGHT!
HEAT IS MADE BY RAPID MOVING OF THE MOLECULES IN MATTER.
SUN CREATES HEAT.
FRICTION CREATES HEAT.
OXIDATION CREATES HEAT.
UNLESS EXCESS HEAT IS REMOVED FROM MATERIAL LIKE METAL, OILS, PLASTIC OR RUBBER, IT WILL RUIN THEM!
GENERALLY, HEAT IS REMOVED BY MOVING AIR.
LIKE SO!!
SOUP
MOST EQUIPMENT IS AIR-COOLED.
☐ SOMETIMES BY HAVING A LIQUID PICK UP THE HEAT AND CARRY IT TO WHERE AIR CAN GET AT IT.
☐ SOMETIMES (AS IN GENERATORS) JUST A BLOWER FAN DIRECTED ON THE HOT PARTS.
SO, ANYTHING THAT STOPS AIR CIRCULATION — PREVENTS COOLING!
LIKE... CANVAS OR BEDROLLS ACROSS GRILLS.
MUD CAKED... BUG-FILLED RADIATOR GRILLS...
LOOSE FAN-BELTS OR BENT FAN BLADES.

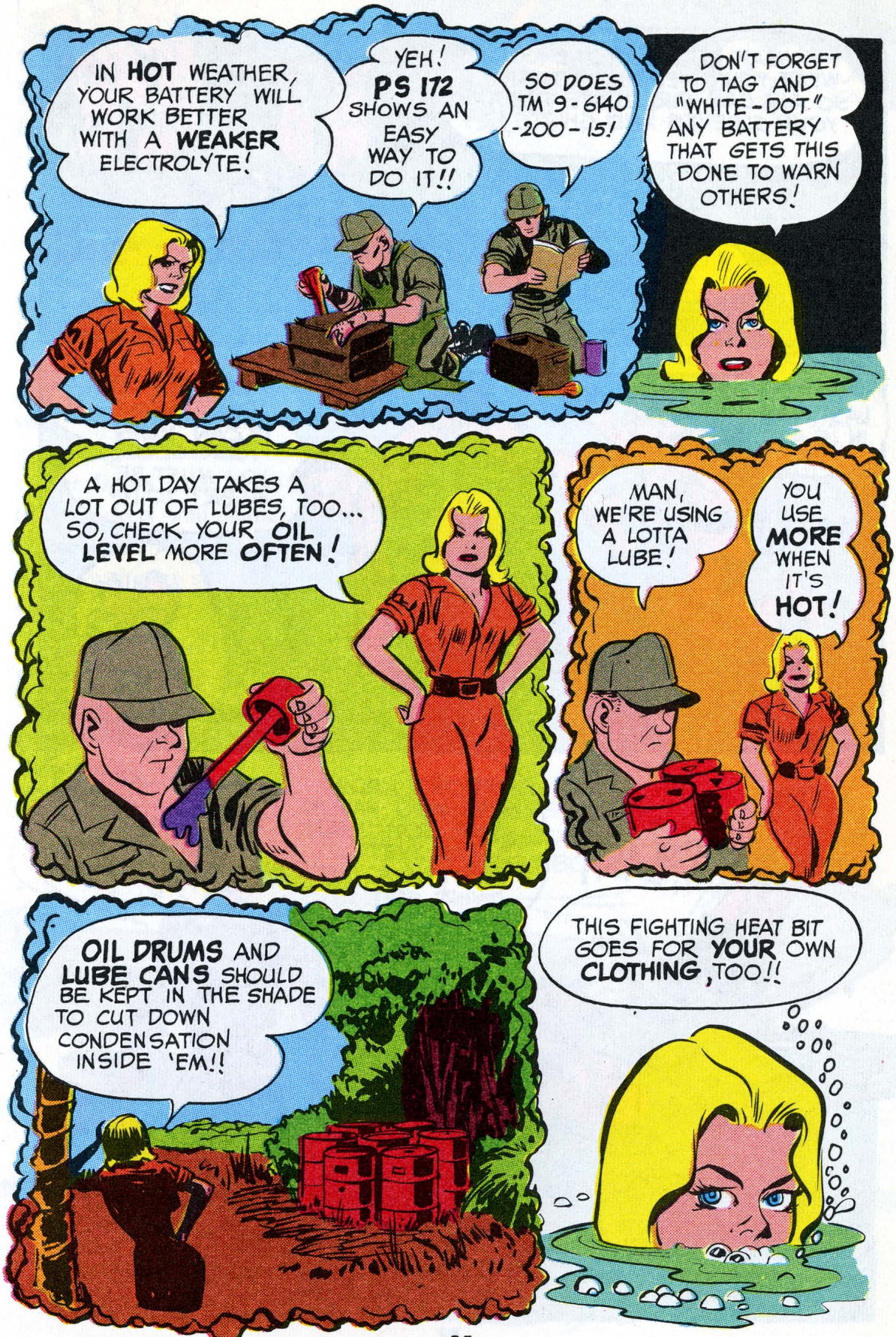

THINK ABOUT IT FOR A MINUTE!! ...ALL THE TIMES WHEN A SIMPLE ACTION ON YOUR PART COULD PREVENT HEAT BUILD-UP!
Yeah, like that radiator cap I shoulda checked for correct spring pressure.
...or that leaking hose I ignored...
...come to think about it... them cooling vanes on my radio sets... they're dusty and greasy. Man, that gook'll block air out, sure!!
and them air filters HMM... I could keep 'em a lot cleaner.
HEY, GET ME OUTTA THE HOT SUN!!
PEOPLE SWEAT WHEN THEY'RE OVERHEATED AND THIS HELPS COOL 'EM. BUT, EQUIPMENT CAN'T SWEAT — IT NEEDS HELP FROM YOU!
?

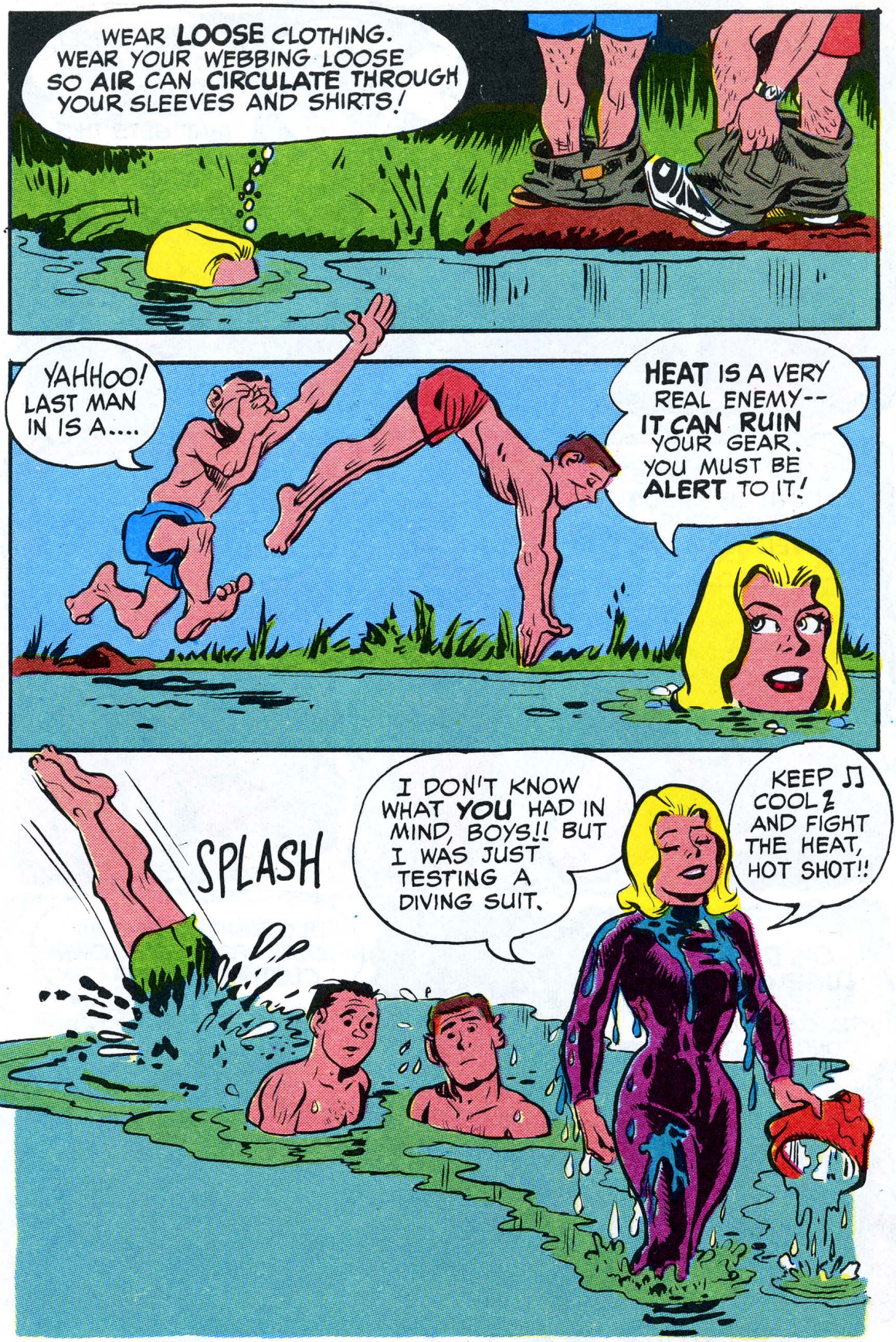
JOE'S Dope Sheet
FIG
HE
KEEP RADIATOR AND INTERNAL FANS IN SHAPE
KEEP LUBES AND GREASES EXTRA CLEAN
UNBLOCK RADIATOR GRILLS
WE HAVE THE WORLD'S BEST EC

JOE'S Dope Sheet
FIGHT HEAT
The Enemy Out Here is HEAT; It Leaves Men and Gear Quite Beat — So, To Keep Things Quite Cool, Use Moving Air as a Tool And Double Your P M ... R-e-p-e-a-t!!
KEEP RADIATOR AND INTERNAL FANS IN SHAPE
KEEP LUBES AND GREASES EXTRA CLEAN
UNBLOCK RADIATOR GRILLS
BATTERIES NEED MORE WATER
KEEP AIR FILTERS CLEAN
KEEP ELECTRONIC GEAR'S COOLING VANES IN GOOD SHAPE
WE HAVE THE WORLD'S BEST EQUIPMENT ... Take care of it

QUIPMENT ... *Take care of it*

WHAT CAN WE DO ABOUT THE HEAT... WE CAN'T CHANGE THE WEATHER!!
NO... BUT YOU CAN DO THE LOTS OF LITTLE THINGS WHICH HELP KEEP THINGS COOL!
LIKE YOU'RE WALKING PAST YOUR VEHICLE AND YOU NOTICE A PILE OF STOWAGE COVERING THE AIR INTAKE GRILLS.
MOVE IT UP SO AIR CAN GET THROUGH!
...OR YOUR AMMO PILE IS COVERED TOO TIGHT.
ADJUST THE CANVAS SO IT LEAVES SPACE FOR AIR TO CIRCULATE... ARRANGE DUNNAGE TO LIFT IT OUT OF THE MUD!
DON'T REMOVE PANELS FROM STATIONARY GENERATORS.
THIS ALSO GOES FOR PANELS FROM YOUR ENGINE COMPARTMENTS, THEY HELP INTERNAL FANS COOL THE AREA.
PUT IT BACK!
BATTERIES NEED SPECIAL CARE IN VERY HOT WEATHER... LIKE YOU, THE HOTTER THE DAY THE MORE IMPORTANT WATER GETS!


IN HOT WEATHER, YOUR BATTERY WILL WORK BETTER WITH A WEAKER ELECTROLYTE!
YEH! PS 172 SHOWS AN EASY WAY TO DO IT!!
SO DOES TM 9-6140-200-15!
DON'T FORGET TO TAG AND "WHITE-DOT" ANY BATTERY THAT GETS THIS DONE TO WARN OTHERS!
A HOT DAY TAKES A LOT OUT OF LUBES, TOO... SO, CHECK YOUR OIL LEVEL MORE OFTEN!
MAN, WE'RE USING A LOTTA LUBE!
YOU USE MORE WHEN IT'S HOT!
OIL DRUMS AND LUBE CANS SHOULD BE KEPT IN THE SHADE TO CUT DOWN CONDENSATION INSIDE 'EM!!
THIS FIGHTING HEAT BIT GOES FOR YOUR OWN CLOTHING, TOO!!


WEAR LOOSE CLOTHING. WEAR YOUR WEBBING LOOSE SO AIR CAN CIRCULATE THROUGH YOUR SLEEVES AND SHIRTS!
YAHHOO! LAST MAN IN IS A....
HEAT IS A VERY REAL ENEMY-- IT CAN RUIN YOUR GEAR. YOU MUST BE ALERT TO IT!
SPLASH
I DON'T KNOW WHAT YOU HAD IN MIND, BOYS!! BUT I WAS JUST TESTING A DIVING SUIT.
KEEP ♫ COOL ♫ AND FIGHT THE HEAT, HOT SHOT!!

ON YOUR SEMINOLE, IT'S . . .

AMBER FOR RAM, GREEN FOR FILTER

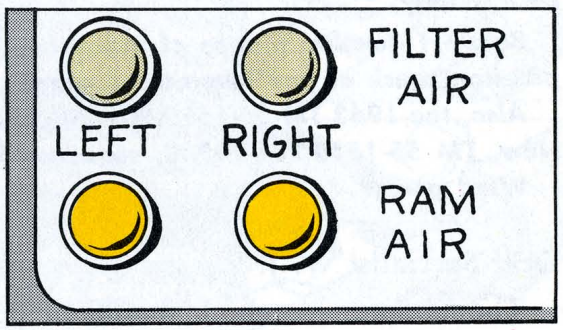
Hold one when you change a bum ram or filter air induction light in your Foxtrot model Seminole (U-8).

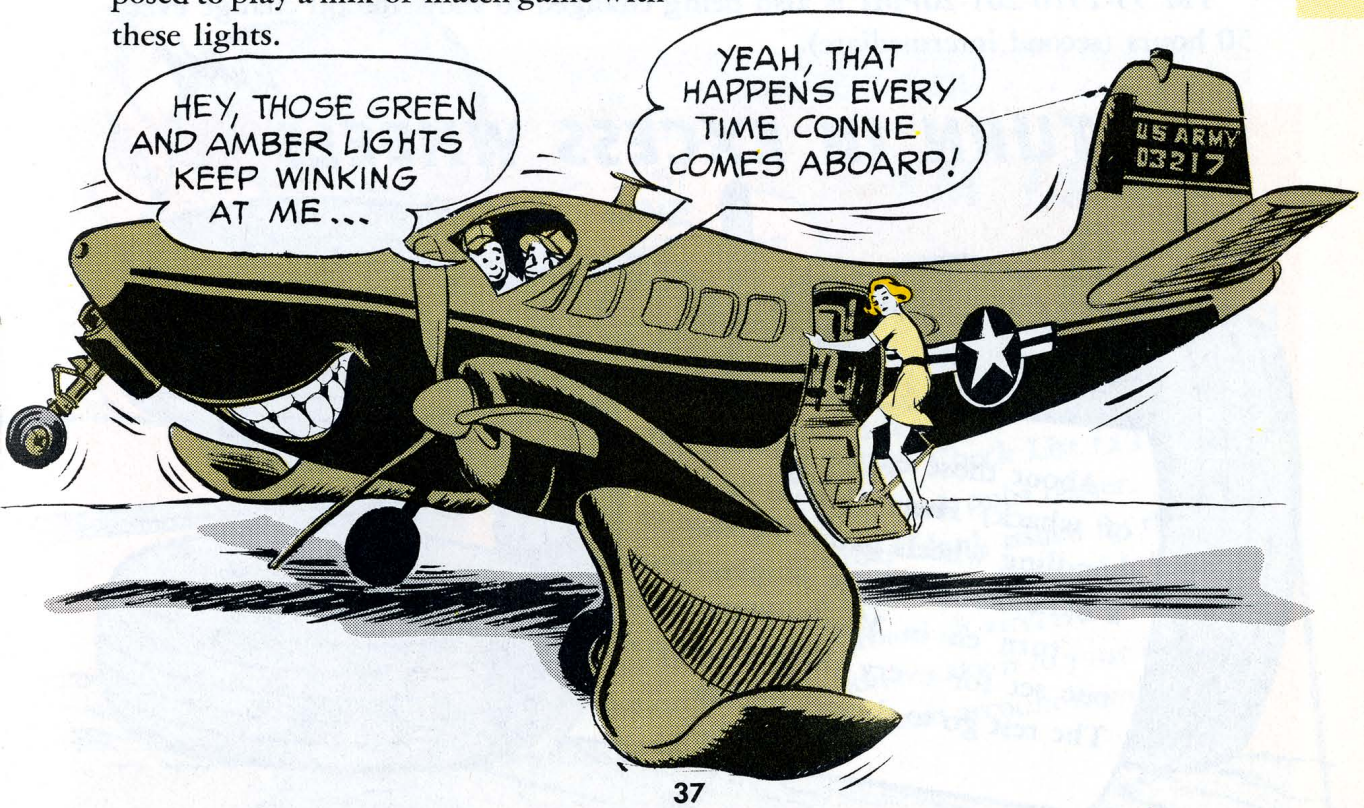
These lights are a big help to the pilot, so you can't just figure it's a same-same deal which light — amber or green — goes into the receptacle. Some amber lights have been found in the filter sockets and some green lights found in the ram sockets . . . that's not the way they're supposed to be, nosir-e-e-e!

A squint-eye look at the air filter circut, fig 12-45, TM 55-1510-201-20 (Apr 66), shows that you're not supposed to play a mix-or-match game with these lights.

The bulb for ram air is amber (item No. 507,515). For filtered air your bulb is green (item No. 506, 514).

If you have to order these bulbs you'll find 'em listed in Fed Cat C6200-IL-A (Jan 66) on pages 4.222 and 4.223.





COMPRESSION CHECK, OIL CHANGE

Dear Windy,

Before I develop a case of eye-strain can you tell me what pub calls for a compression check on my Seminole engine?

Also, the 1963 TM 55-1510-201-20 called for an engine oil change every 50 hours. Now, TM 55-1510-201-20PMI, sequence 9.12 calls for a 25-hr oil change.

What gives?

SP5 W. J. P.

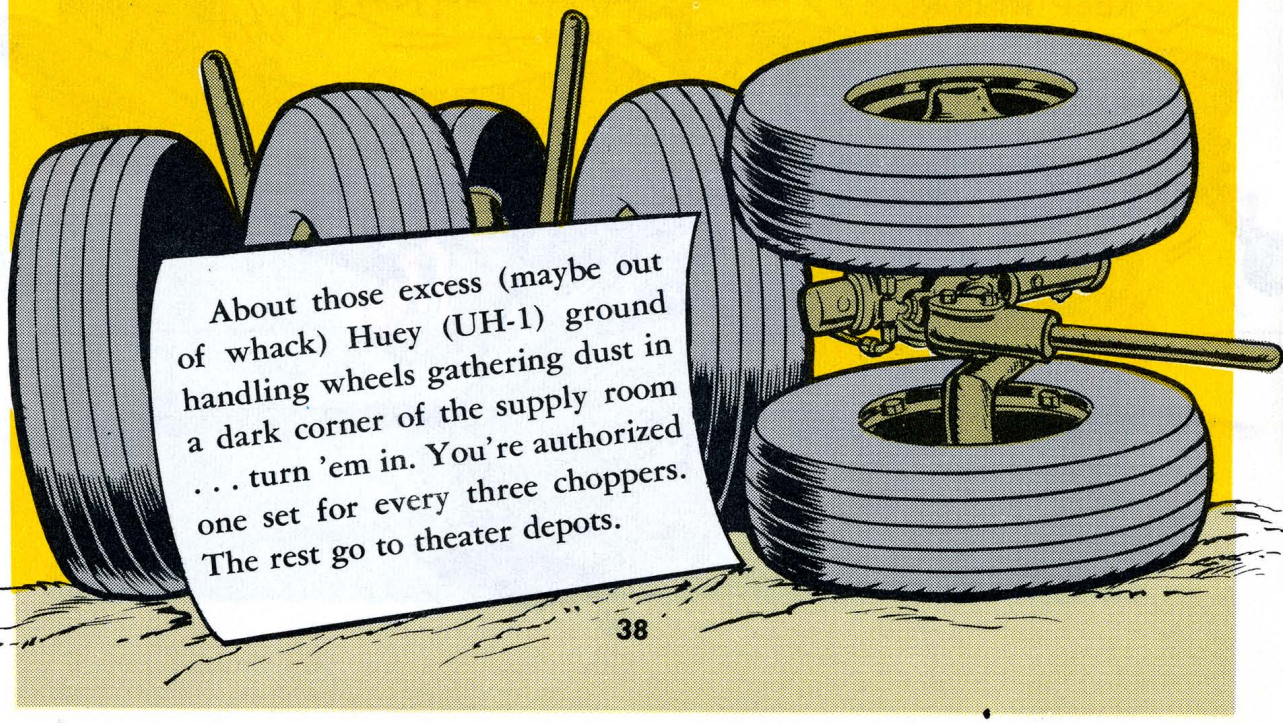
Dear Specialist W. J. P.,

The compression check should be pulled every 200 hours (second periodic) and TM 55-1510-201-20PMP is being up-dated to show just that.

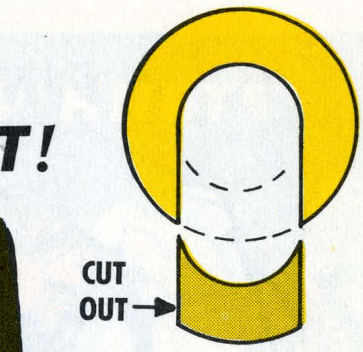
TM 55-1510-201-20PMI is also being changed to show the oil change every 50 hours (second intermediate).

Windy

TURN IN EXCESS WHEELS



LEAK STOPPER — JOHNNY ON-THE-SPOT!



Dear Editor,

Like Johnny with his finger in the dike, we have come up with a field fix to stop leaking push rod housing packings in our aircraft engines.

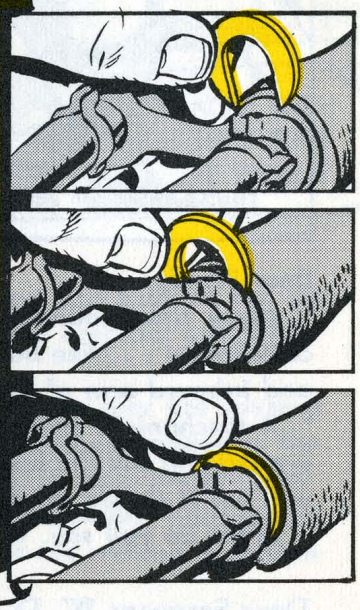
The Raven O-435 and Seminole O-480 packings leak in no time. Then you have to take off the rocker box cover, rocker arm, push rod and housing, to put in new packing, P/N 62922. This is a real chore.

So, rather than using a lot of man-hours on this routine, we came up with an aluminum washer, P/N 960PD1216, FSN 5310-187-2404, and cut it out like this.

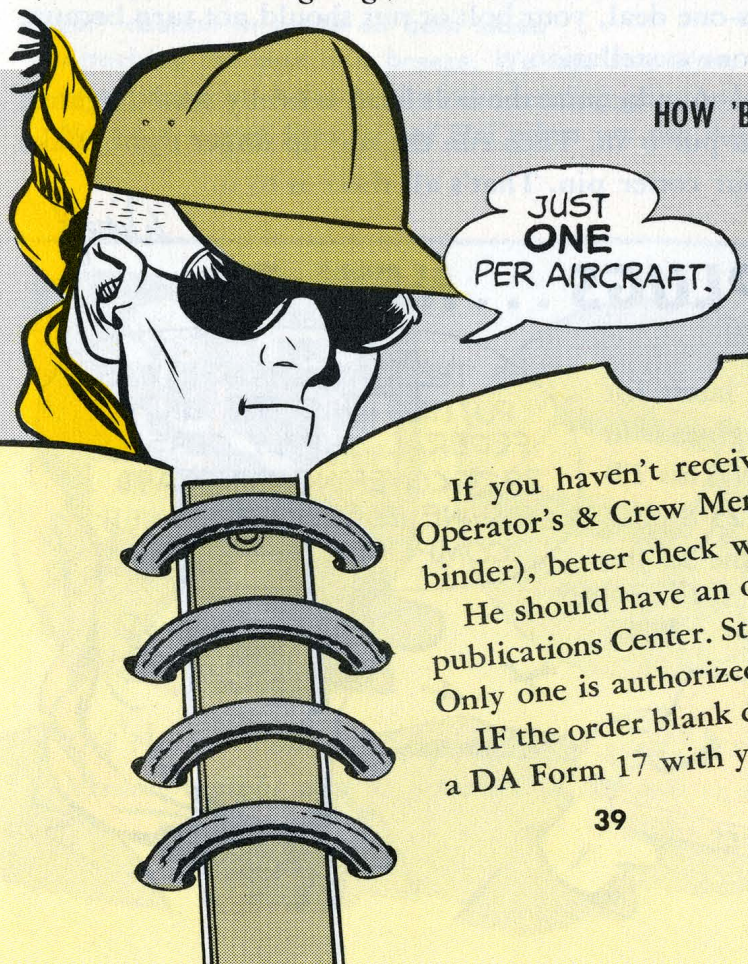
Now, when a leaking packing shows up at the engine housing, in a matter of seconds we simply slip one of these washers between the shroud tube spring, P/N 66717, and the flat washer, P/N 66728.

The aluminum washer increases the tension against the packing and stops the leak, usually all the way to engine TBO . . . works like a charm!

Donald F. Engle
Fort Ord, California



(Ed Note—Good going.)



HOW 'BOUT THAT!

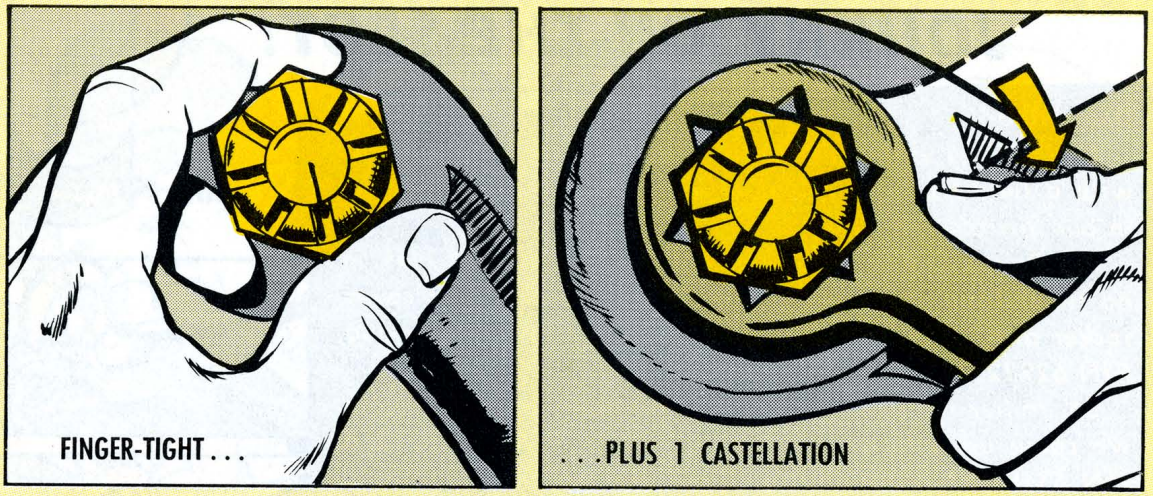
TM 1500-1

If you haven't received TM 1500-1, U.S. Army Operator's & Crew Member's Check List (a 14-ring binder), better check with your pubs officer.

He should have an order blank issued by the AG publications Center. St Louis, for getting this binder. Only one is authorized for each aircraft.

IF the order blank didn't make it to your unit, use a DA Form 17 with your pub account number.

FINGER TIGHT — PLUS



Dear Windy,

Many times maintenance pubs say to tighten a nut or bolt finger tight plus one castellation . . . like bolt, P/N AN174H17, on the push-pull tube between swashplate and inboard arm of the bell-crank on the OH-13T engine mount.

A mechanic is caught in the middle on this tightening deal. One pilot on his walk around will say the bolt or nut should turn under a hand pressure check while another will say it should not turn.

What do you say, Windy?

SFC W. D. L.

Dear Sergeant W. D. L.,

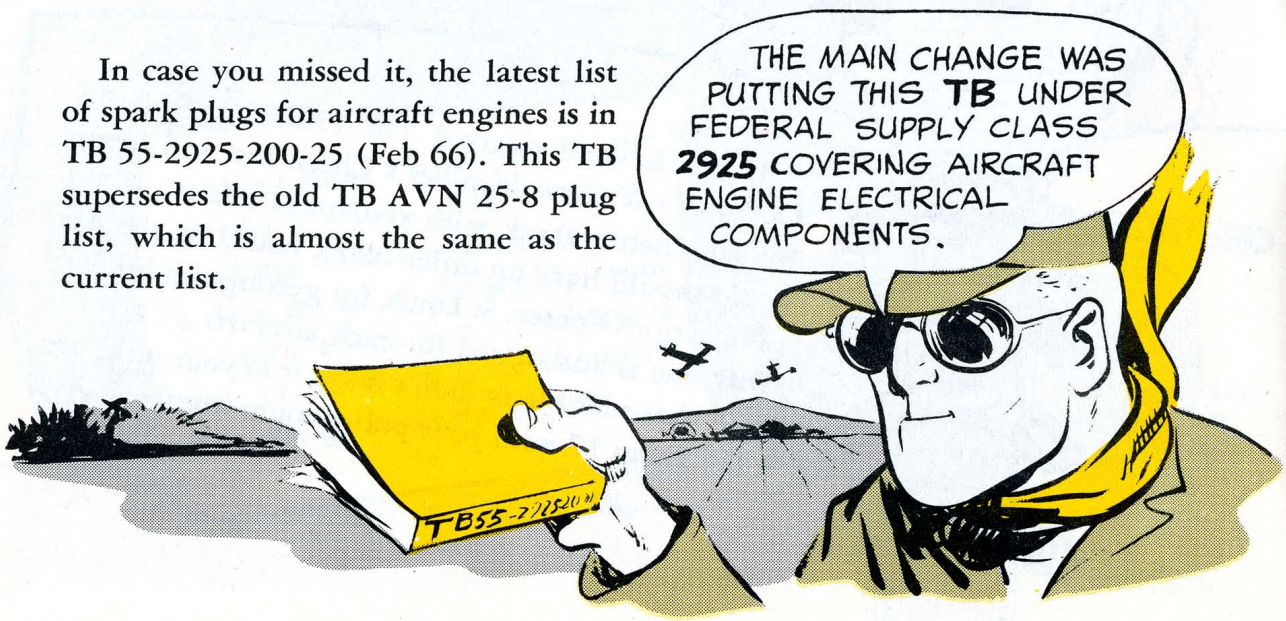
Under the finger-tight-plus-one deal, your bolt or nut should not turn because you use a wrench to get the one castellation.

To prevent loose bolts and nuts be sure the bolt head is firmly seated against the mating surface when you put it in. Then run the nut up finger tight, make with the wrench and add your cotter pin. That's all there is to it.

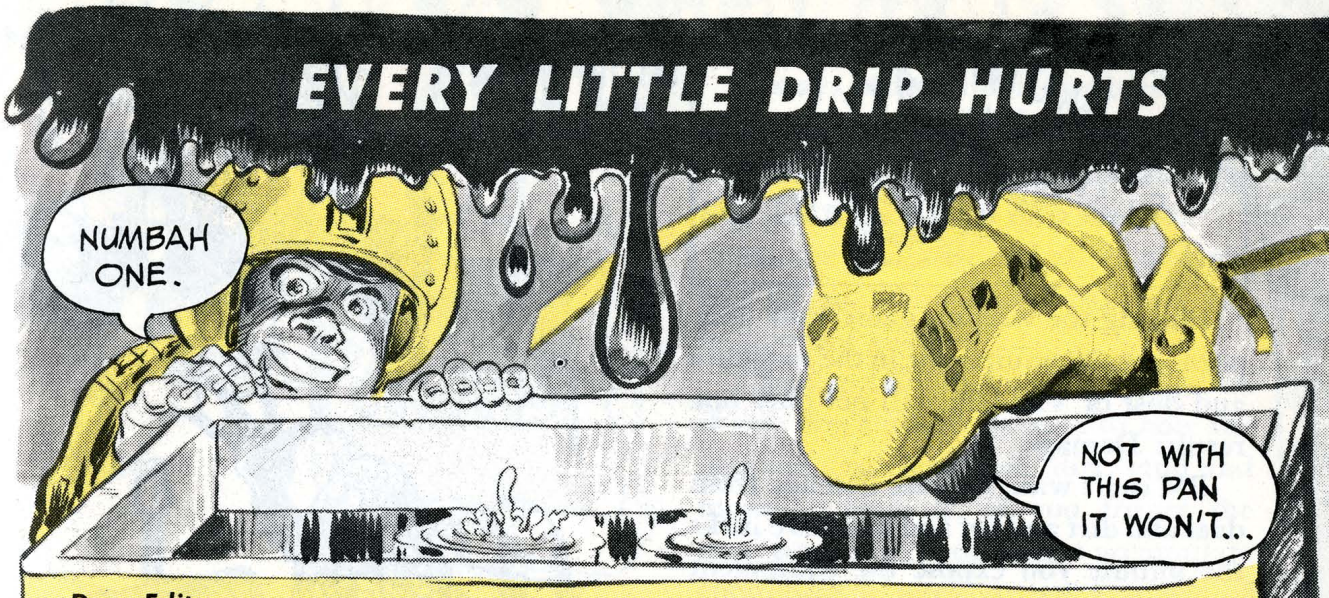
Windy

SAME PLUGS . . . NEW TB

In case you missed it, the latest list of spark plugs for aircraft engines is in TB 55-2925-200-25 (Feb 66). This TB supersedes the old TB AVN 25-8 plug list, which is almost the same as the current list.



EVERY LITTLE DRIP HURTS



Dear Editor,

Anytime a Chinook (CH-47) is parked for any length of time you have to run up the engines so a lot of oil flows from the aft transmission, engine breather and what-have-you, thru the drain tubes.

A problem arises when this oil runs along the cowling onto the rear tire causing separation of the ply, swelling and a ruined tire. A drip strip has been added to the newer aircraft to divert the oil from the tire but it doesn't entirely cure the problem.

So, we made up this simple drip pan. It can be made out of an empty 1-gal can of thinner, solvent or hydraulic oil, cut in half. To attach the pan we welded a .050-in piece of metal 1½-in by 17-in to the contour of the pan.

Finally, we painted the outside of the pan red and stenciled a "remove before flight" caution in white on both sides.

Attaching the pan is a breeze. We use two short bolts to secure the pan to the existing threaded holes in the rear landing gear housing.

No more ruined tires for us! Not when we use this handy little drip pan.

Charles W. Doerson
New Cumberland Army Depot

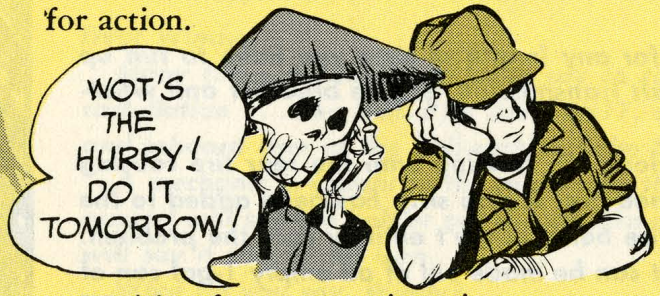
(Ed Note—Your field fix looks real good. A red cloth "remove before flight" streamer might also be attached to the pan so it would be easily spotted.)

COMMUNICATIONS
COMMUNICATIONS
COMMUNICATIONS
COMMUNICATIONS

GET THE PICTURE? DON'T MIX . . .

Playing the waiting game with your photography equipment in the moisture and dust of Vietnam will net only one result: Damage.

PM can't wait, because damage from dust and dirt and rot and moisture lurks the minute you expose the equipment for action.

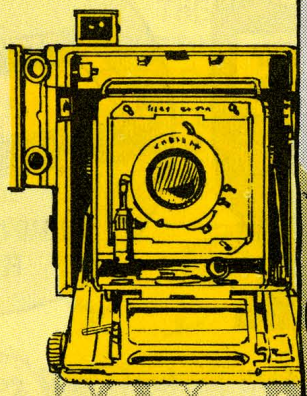


Waiting for a convenient time to get to maintenance is just about the same as letting the VC use your gear for target practice. Either way, it'll head for the salvage pile and leave you empty-handed.

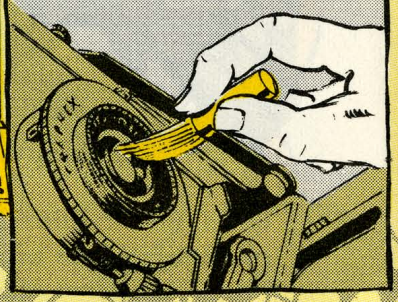
So you know it. So here are some PM points to be extra particular about:

CAMERA EQUIPMENT (KS-4, -5, -6, -10, KE-15 ETC.)

Before you use the camera, wipe the lens dry and clean with Lens Tissue, FSN 6640-285-4694, or similar material. Never clean the lens with anything that can damage it . . . and that never includes stiff brushes, coarse rags and such. If you get a tough smudge, dab some liquid lens cleaner, FSN 6750-408-5175, on the lens tissue and clean away. Don't apply the liquid cleaner directly to the lens.



To remove concentrated dust and dirt from your lens, use a fine camel's hair brush before working with the liquid lens cleaner.



COMMUNICATIONS

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FILM

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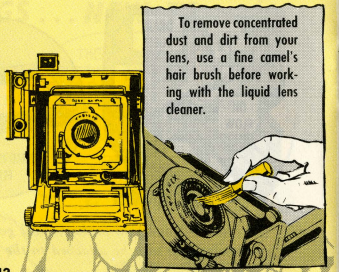
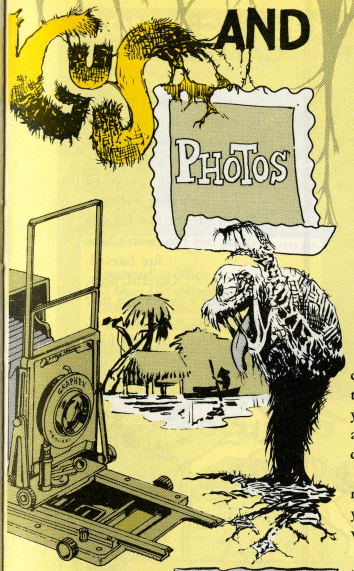
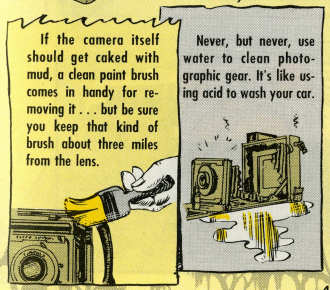


AND PHOTOS





Always protect the lens when you're cleaning other parts of the camera.

When you're through with the camera, put it back in its case soonest.

Put the gear, case and all, in a plastic bag (if you can't find a bag, use any waterproof cover).

Clean and dry the camera daily, even if you don't use it. Be sure to take the lens out and clean dust, dirt, sand and moisture from it. If you forget the sand possibility, you might accumulate enough in a week to put you out of business.

MISCELLANEOUS GEAR AND TIPS

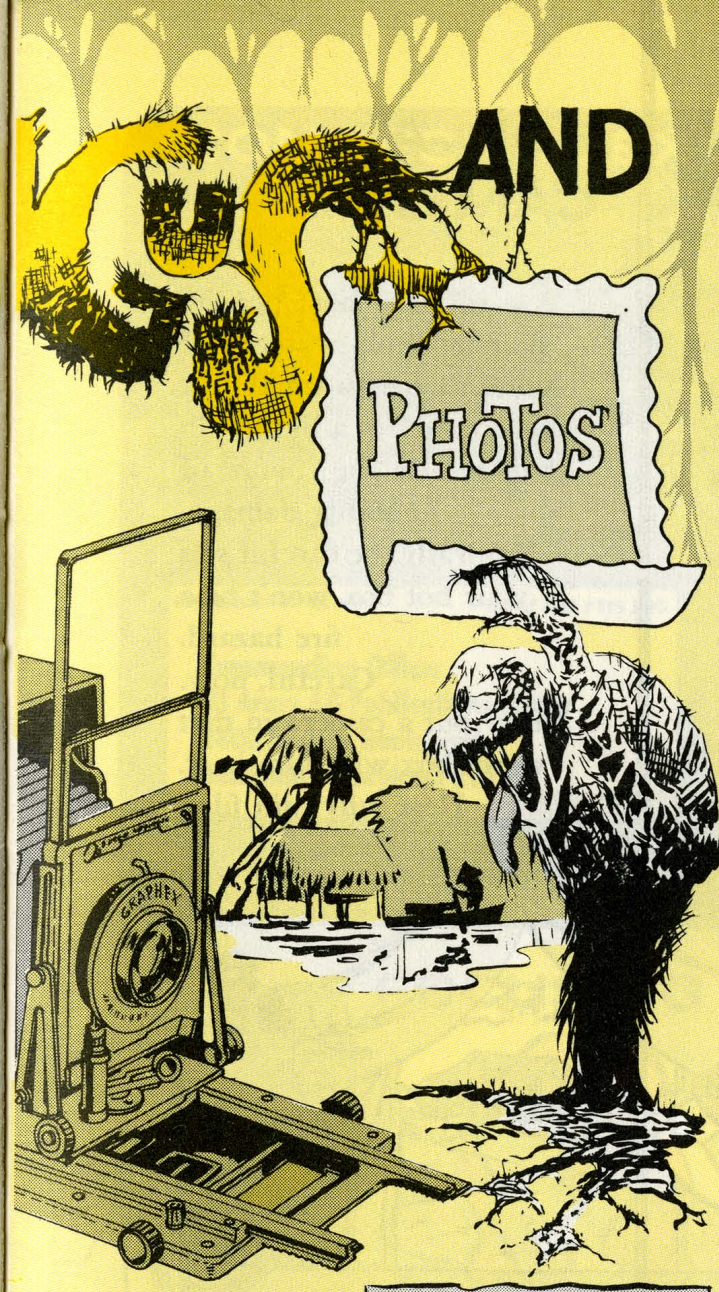
Never leave photo gear exposed (uncovered) and uncleaned for an extended time (like, for more than a day). When you're through with the gear, clean it and put components in their respective cases.

Check enlargers, projectors and other metal gear for rust every day. When you find rust, get rid of it and make with the spot paint.

Where possible, store all gear in plastic containers, accompanied by dessicant to drink up the moisture.

If you've got an AN/TFQ-7 mobile lab, be extra careful. Make with constant PM to prevent moisture accumulation. Keep the lab clean, the surfaces painted and everything as dry as possible. You might even erect a tarp above it, for two reasons: It'll give the lab weather protection and keep it cool (reasonably cool, that is).

In other words, the focus on PM is about the only guarantee on getting the picture.



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In other words, the focus on PM is about the only guarantee on getting the picture.

If the camera itself should get caked with mud, a clean paint brush comes in handy for removing it . . . but be sure you keep that kind of brush about three miles from the lens.

Never, but never, use water to clean photographic gear. It's like using acid to wash your car.

SOMETHING HOT DAMP FOR A CAMERA

That sticky, soggy humidity that's waiting for you just outside your tent flap is already working on your camera equipment.

That is, it's working on your stuff (particularly your camera bellows) via fungus, mold and condensation if you haven't taken a few precautions.

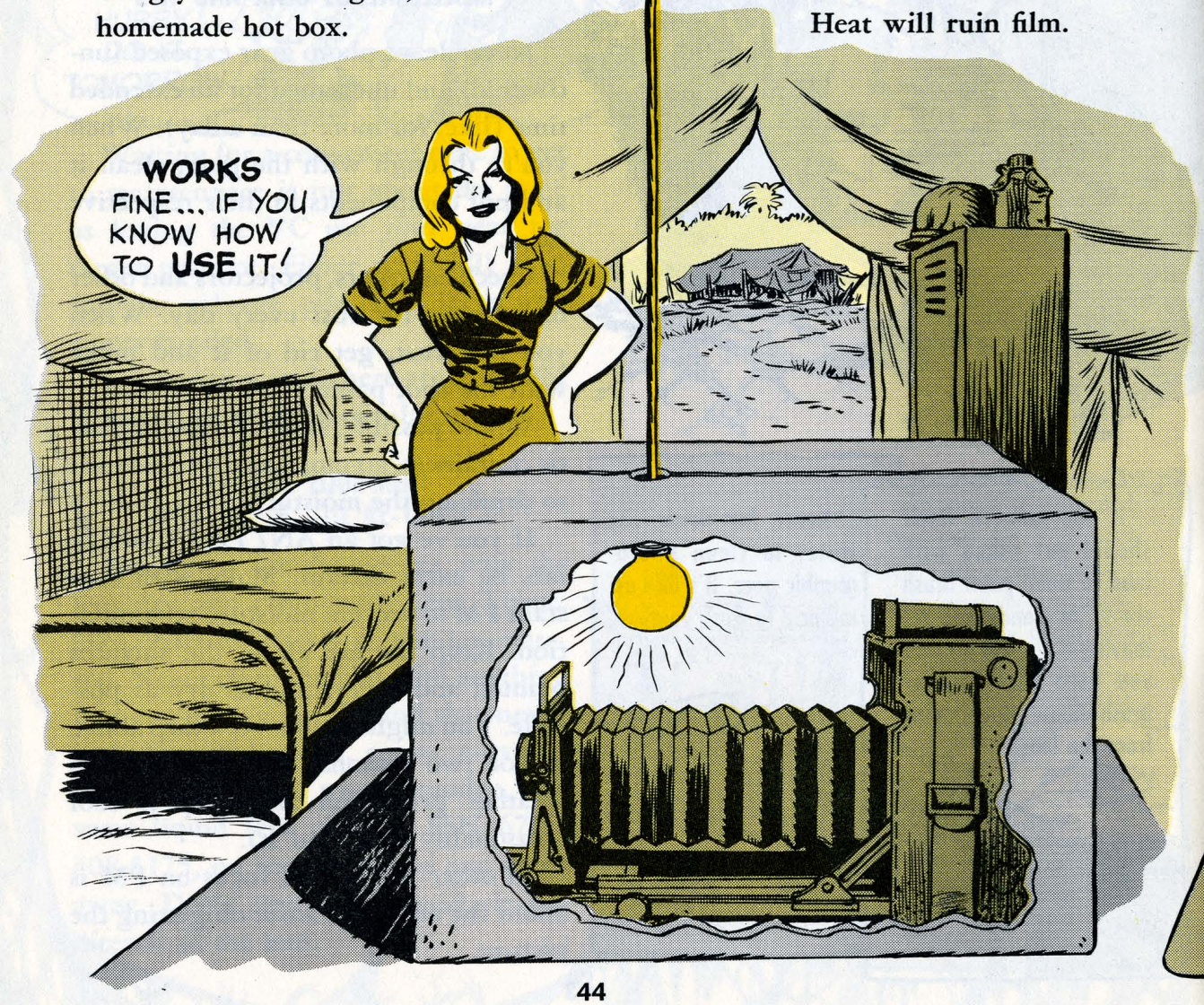
The best way to fight the problem is with heat, dry-type. Like whenever you can, and whenever you're not using your camera gear, store it in a homemade hot box.

A cardboard box, poncho or reasonably waterproof container over a small heat source such as a light bulb will reduce the chance of humidity damage.

Naturally, be careful so's your hot box won't be a fire hazard.

Careful, now.

Never put a camera in that warm box with film in it. Heat will ruin film.



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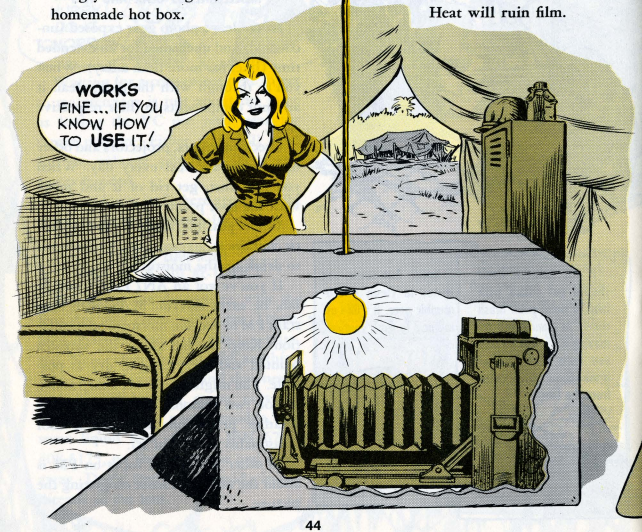


COMSEC INDEX

You say you're a COMSEC man and you've been wondering how to track down pubs you need?

Read on.

DA PAM 310-9, Index of Communications Security (COMSEC) Publications, is available to authorized units requiring the PAM through the simple process of firing off a DA Form 17 to:

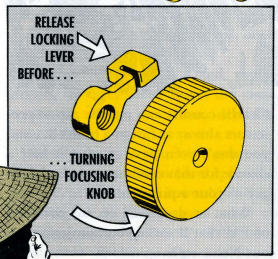
DEPARTMENT OF THE ARMY — POSTAGE AND FEES PAID

Commanding Officer
US Army AG Publications Center
2800 Eastern Boulevard
Baltimore, Maryland 21220

The pub is confidential, but it's automatically available to units needing it as new ones come out, providing, of course, you update your DA Form 12-4 by listing the DA PAM. The 12-4 goes to the same address as the 17.

DA COMSEC pubs dated 1 Aug 66 and later are on pinpoint distribution, as per Sect III, Ch 3, AR 310-1. You need a DA Form 12-43 for pinpoint, and it goes to: U.S. Army AG Publications Center, 1655 Woodson Road, St. Louis, Missouri 63114.

FOCUSING IN ON PM



Sunshine may be a joy for you but keep it away from your starlight scope (FSN 1090-688-9954).

Your best bet is to stow the scope in its carrying case, especially when you're puttin' it away or transportin' it in a vehicle.

Too much exposure to sunlight or bouncin' in the bed of a truck will damage your scope and leave you in the dark. Mighty sticky.

And, when you're usin' the carrying strap make sure the lens cap is on the objective lens to keep out daylight, dust and dirt.

Finally, remember to release the locking lever before turning the focusing knob. You could strip the knob and you'd wind up with a limp and fuzzy focus.

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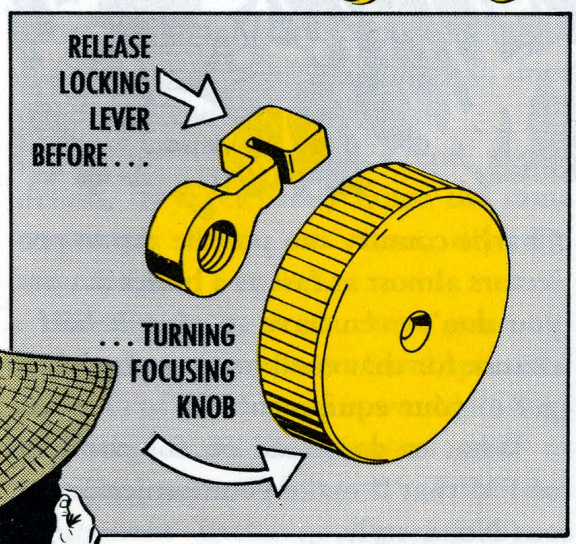

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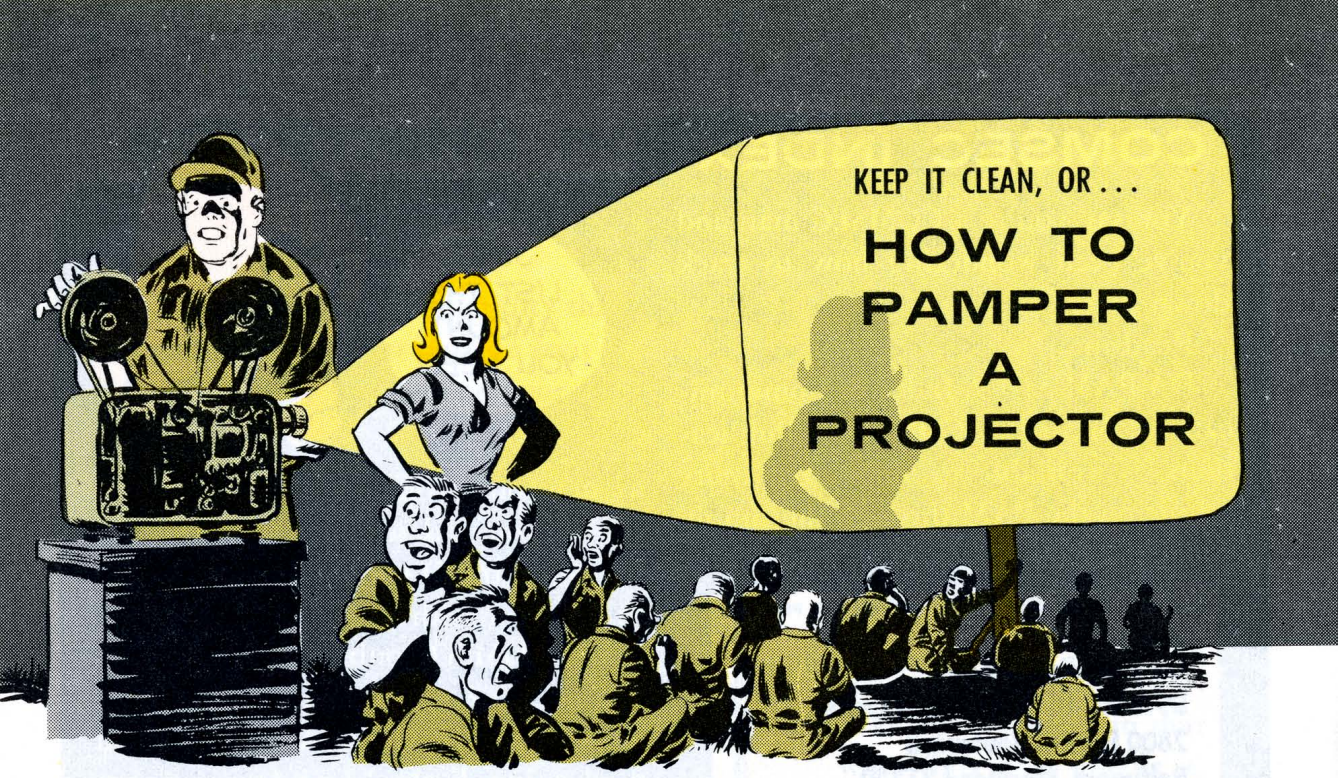
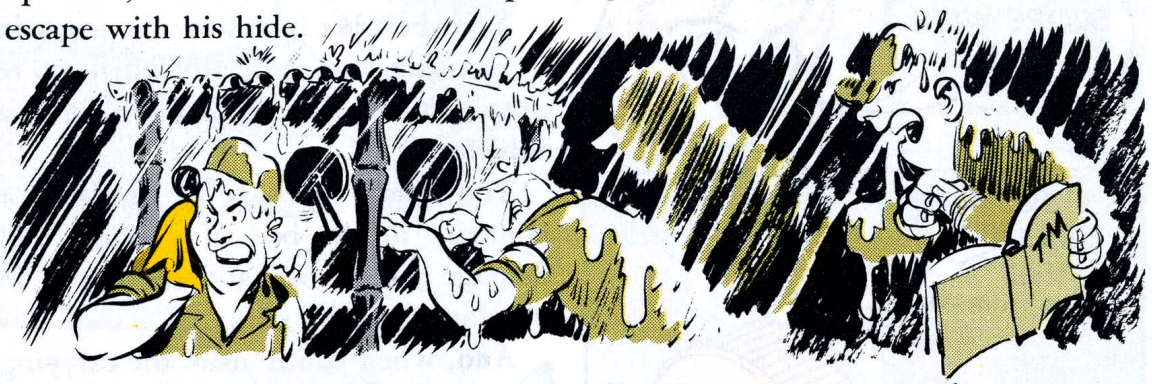


Picture this: The push is over. Rough days are behind for awhile, and tired troops are bunched around a movie screen waiting to bug-eye the torrid torso that'll come to life thru the magic of a movie projector.

The film's got a No. 1 rating, and everybody's anxious. Some are even panting.

The operator slips the reel in place, makes some preliminary adjustments, puts the power to the projector and . . . nothing happens!

Outraged groans from the troops echo from Da Nang to the Delta. The operator, after some useless attempts to get the show on the road, is lucky to escape with his hide.



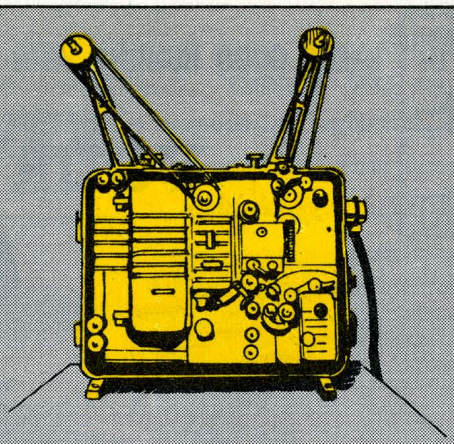
Lack of adequate PM did in another projector. It's an old story.

The only thing new is that some joker thought he could get by one more day without PM in a place where lack of PM can do more than knock out projectors.

The humidity, mud and sand of Charlie country can put the zap to projectors almost as fast as a bullet . . . and you don't even have to give it half a chance for that combination of gook to get to your equipment.

What to do? Read on for the kind of PM that'll make your projector put out No. 1 style.

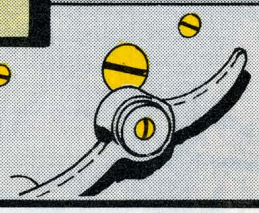
Like, keep your projector in its case when you're not using it.

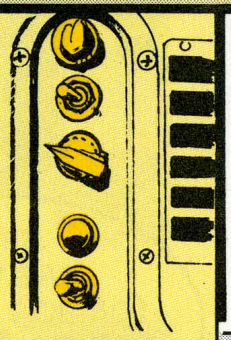


Keep the outer surfaces clean of mud, dust, dirt, oil or other gook (and, uh, use a rag or such. Dousing the projector with water can do more harm than good).

Frequently, check the surfaces for rust, cracks or chipped paint. If you find any of those faults, get 'em corrected.

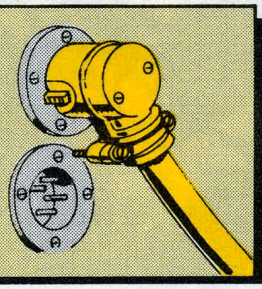
Be sure accessible screws and nuts are snugged down firmly.





And, if switches or controls bind (or are too loose) get 'em replaced or repaired before they reach the "no show" stage.

Cords and, for sure, connectors should be free of oil, dirt, paint and other good stuff. Also, start getting a new one if you've got frayed or damaged cords. Don't wait till they short out and close you down.



Never use water to clean the lens and reflector, but do keep 'em clean. Almost all lens care can be handled with lens tissue such as FSN 6640-285-4694. For tough cleaning jobs such as removing oil or bad finger marks, you might need an assist from a liquid lens cleaner like FSN 6750-408-5175.

Each time you use the projector, it makes solid PM sense to remove and clean the aperture and pressure plates and to open and clean the sprockets. If the plates have developed a burr or two, get 'em smoothed off. Like, it's extra important you don't put off your chores on the plates and sprockets, since they're on the film path.

As for reels, spindles and sound drums, they get pretty much the same treatment. Keep 'em clean, dry and scratch-free.

Finally, be sure you have your authorized spare parts on hand, plus the equipment's TM. And it wouldn't hurt anything at all if operators were as familiar with FM 11-41 (Film and Equipment Exchange Operations) as they are with the equipment TM. The FM is dated Jan 62.

It shouldn't have to be said that only trained, licensed operators should be operating the projectors. But then again it shouldn't have to be said that PM is just as necessary as a trained operator.

Good viewing!

GENERAL & SUPPORT

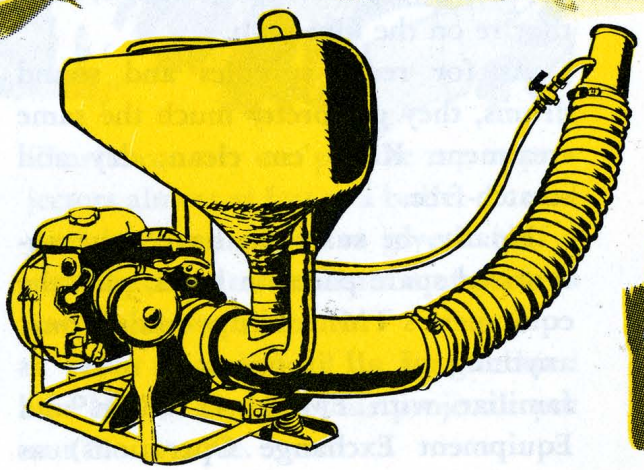
HERE'S GOOD HUNTING WITH

YOUR MITY

I THINK OL' CHARLIE'S CRYIN' NOW... GO GET 'EM, SPACEMAN.

That defoliator, tear-gasser, juice gun and smoke dispenser you call a Mity Mite is a good thing from the gear garden. It'll put out lots of CBR jungle seasoning if you take care of it.

Keeping the Mite in shape takes good PM on 3 things — Engine, Blower, and Hopper-Hose set-up, and making sure after each use that all screws, nuts, and bolts are good and tight.



GENERAL & SUPPORT

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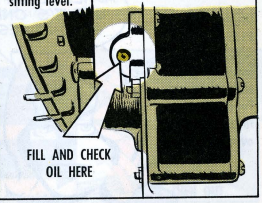
ENGINE CARE

There's lots of kick in that solo-cylinder lightweight. Filtered air, good oil, and a few special tricks will keep it kicking. Main items—

Four gallons of gasoline and 1 quart of OE 30 in a 5-gal can and shake. That's enough to run you about 9 hours.

Never put in over ½ pint of oil per gallon of gas. Using too much oil just fouls up your spark plug.

OIL IN GEAR CASE — That 5/32-in hex-socket plug at the base of the gear case is where you put OE 10. Check that oil level every day. Put in just enough OE so it'll come to the throat of the plug hole when the rig's sitting level.



DIG DEEPER MORE

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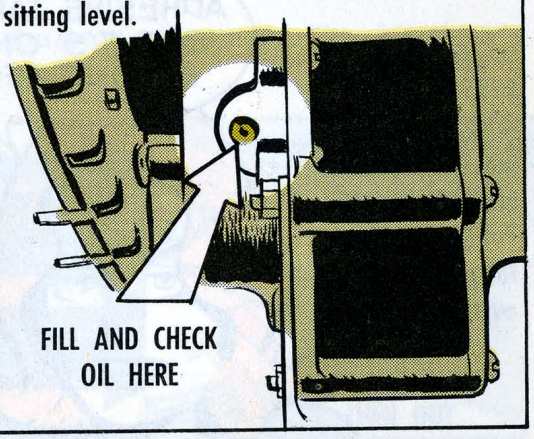
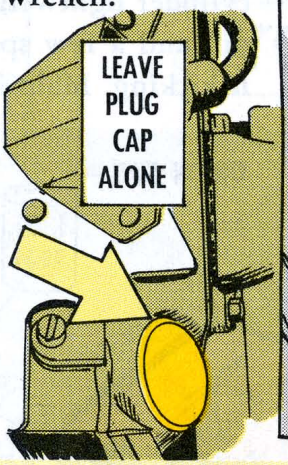


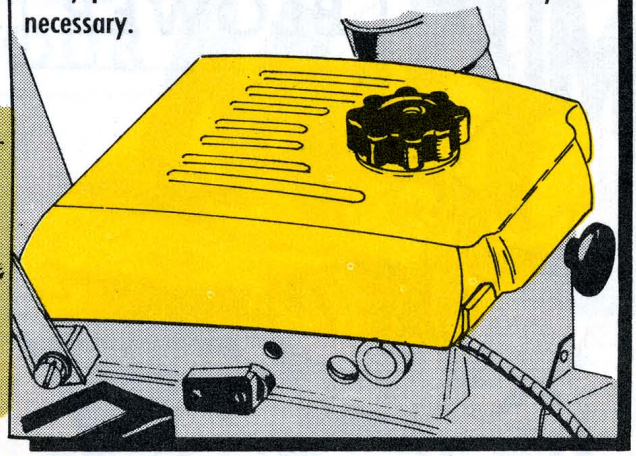
PS MORE

You might have support weld that hex-head key wrench long-end-first into the plug . . . no lost wrench.

Forget that plug cap at the lower right-hand corner of the engine about 2½ inches below the spark plug. It's a leftover from the peacetime duty of that engine, so hands off.

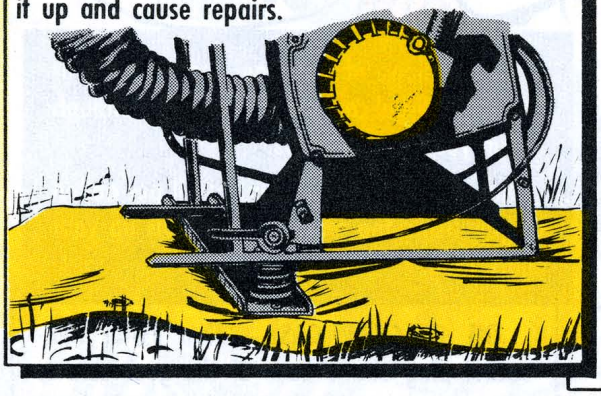


AIR FILTER ELEMENT — Wash in cleaning solvent after every 100 hours operation, and in real dusty places do it more often—even once a day if necessary.

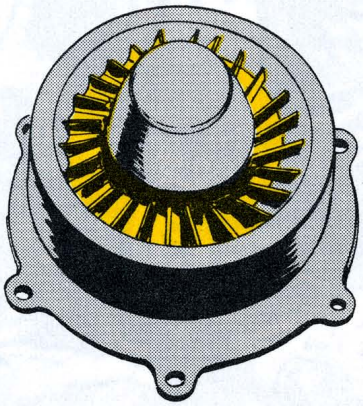


BLOWER

INTAKE SCREEN — Use a GI jacket, shirt, or tent canvas under the Mity Mite if you have to run it on the ground. Keep leaves, grass, and sticks off that screen. Even sucking sand through will mess it up and cause repairs.

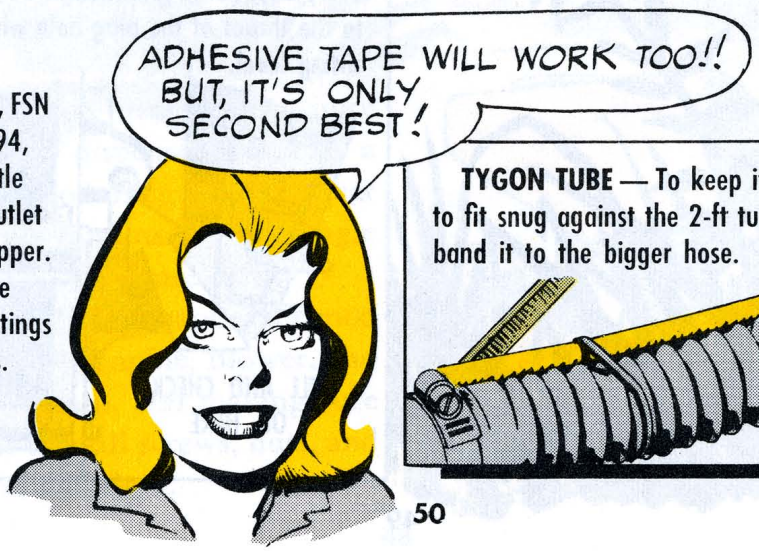


BLOWER WHEEL — A piece of metal, stone, or stick will stop you cold. And that 28,000 RPM will tear the wheel up and could bust the casting.

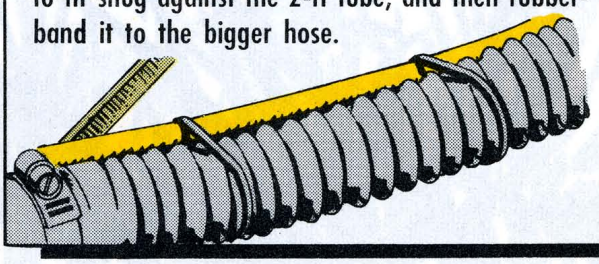


HOPPER-HOSE HINTS

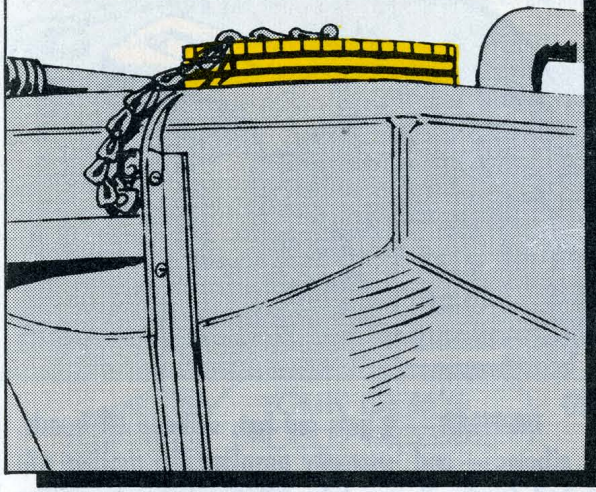
Use your tape, FSN 8135-663-0194, to seal any little holes in the outlet elbow and hopper. Put it on inside the plastic castings over the holes.



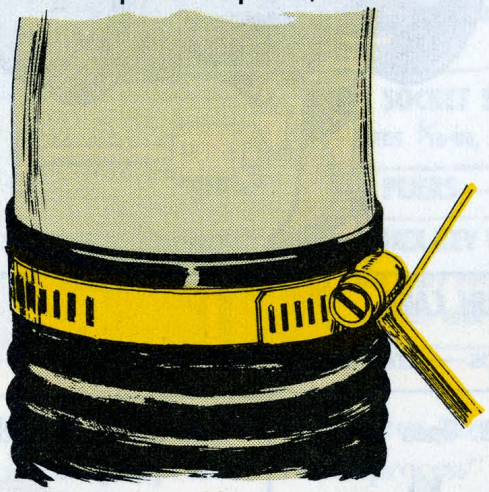
TYGON TUBE — To keep it from kinking, cut it to fit snug against the 2-ft tube, and then rubberband it to the bigger hose.



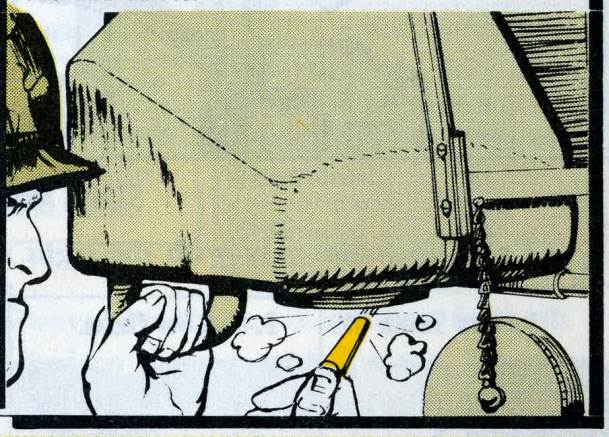
LID — The Mite works off turbulent air, so keep the lid tight. This also keeps your powder dry—



CLAMPS — Keep tight so the hose won't slip off, but not so tight they collapse the plastic elbow underneath. Tape can help here, too.



CLEANUP — When you've used dust, give the hopper a blow-down and shakeout. The motor pool compressed air hose can be handy. And air is good to dry out liquid so you can run powder — but good'n dry it's got to be, and that includes Tygon tube and valves.



POWER-PACK LOW-DOWN

Good power for the job includes right carburetor adjustment. On this rig it's made easy with 2 screws —

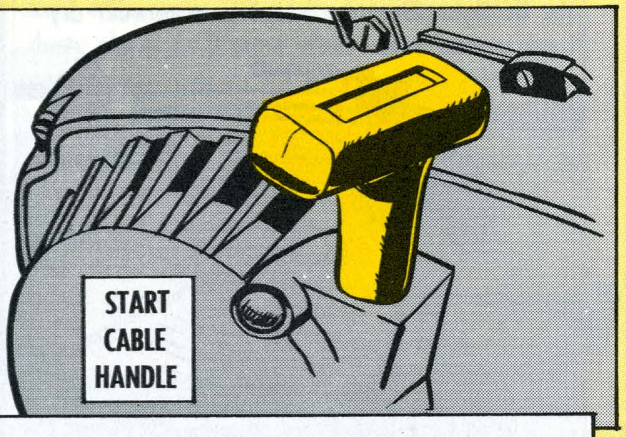
LO — Turn it all the way in without jamming, then back out a full turn more'r less till she idles right. Yep, LO means low-speed control.

HI — High speed is set at ¾ throttle by turning all the way in and backing out.

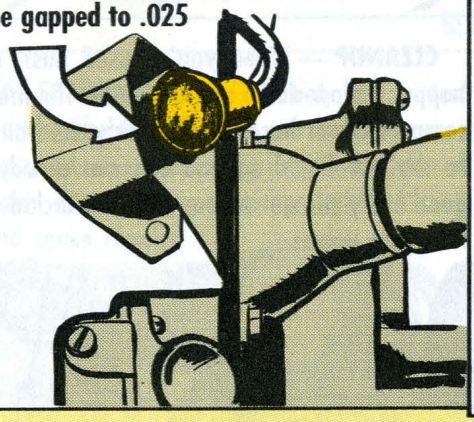
PS MORE

You've got 3 other made-easy items to look after also—

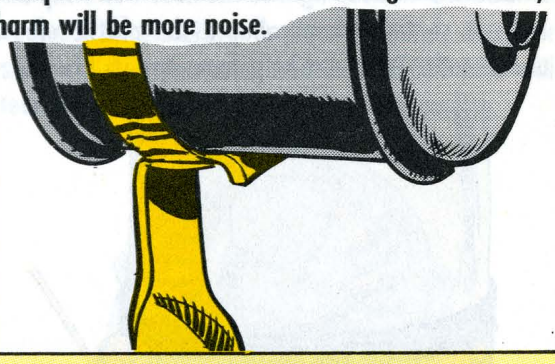
START CABLE — If it breaks, take off only the fan housing. You needn't take out the rope pulley. Nylon line is a fine replacement if a spare rope, Homelite No. 58805, isn't handy. Thread nylon rope through housing and tie a knot. Then set the knot with heat to keep it from untying — a match or your lighter is good. Next wind pulley up tight, then back off 1 to 2 turns to aline pulley slot and rope. Put the rope in the slot, and the spring will do the rewind job.



SPARK PLUG — That Champion TJ-8J (or equal) has to be gapped to .025 inch.

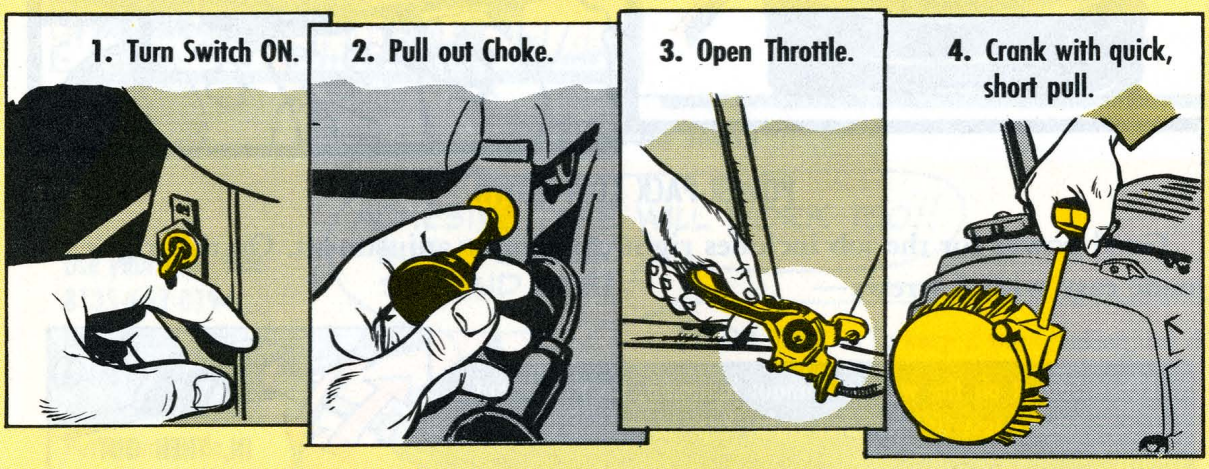


MUFFLER — It gets red hot, so keep off hands, elbows — and 'specially gasoline. The muffler will last longer if you take off the frame-to-muffler clamp. If the muffler falls off during use the only harm will be more noise.



START AND RUN CARE

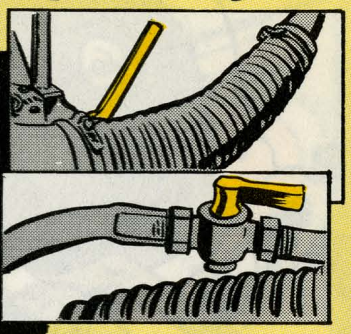
Crankup comes easy with the right steps — and saves flooding.



And when she catches, push choke in halfway for warmup, then all the way in to run. A warm engine you can start without choking. If OFF-ON switch fails, take off switch and wire straight to the engine. You can start without the switch. To stop, just pull the choke all the way out.

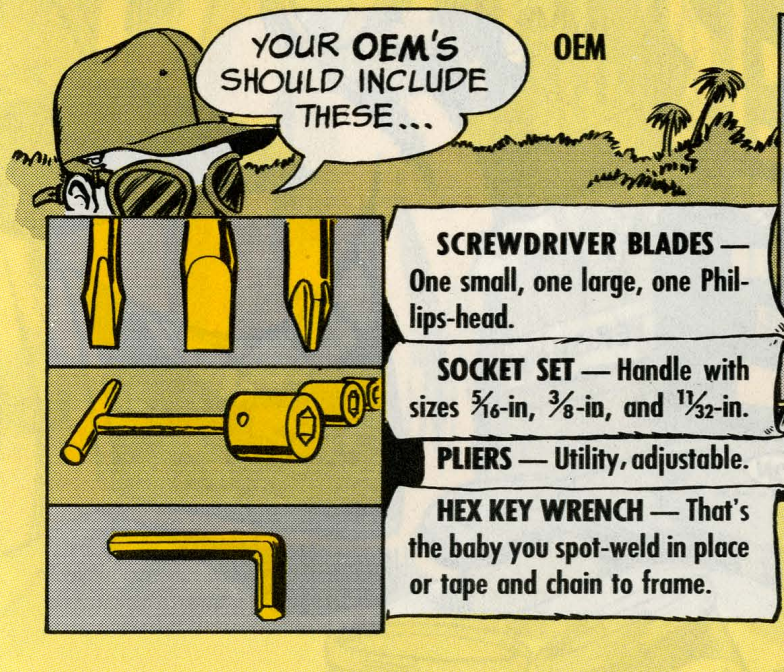
SUDS OR POWDER

Check how your valves are set before you load liquid or pulverized agent, and before you get the M-17 mask on.



POWDER — You make sure the petcock to the Tygon plastic line is shut good. Then open the valve on the bottom of the hopper to let the dust come through at the speed you need.

LIQUID — Get the powder valve closed. Before you start squirting, open the rear valve behind your elbow all the way and leave it so. Then control the amount of flow with the front petcock just behind the nozzle.



SCREWDRIVER BLADES — One small, one large, one Phillips-head.

SOCKET SET — Handle with sizes 5/16-in, 3/8-in, and 11/32-in.

PLIERS — Utility, adjustable.

HEX KEY WRENCH — That's the baby you spot-weld in place or tape and chain to frame.

GAS CAN AND SPOUT — Your easy-handling friend can be a spare quart carry-along, and it's tough to fill the gas tank without it.

PLUG WRENCH—For changing spark plugs, sure.

You also get a spare 3½-in hose clamp, a roll of tape, and a parts book.

When ordering parts for Mity Mite, always give the serial numbers for both engine and dispenser. "Hand-process" marked on the request helps, too. There's a bunch of Mites around meant to be cannibalized; if any needed part can't be had thru cannibalization, then your support will have to get it through request to the US Army Ammunition and Supply Agency, SMUAP-QWD-A, Joliet, Illinois 60436.

Not in your kit, but super-handy is a pocket knife with screwdriver blade, like FSN 5110-240-5943.

Any time the Mite's gonna be put in storage, drain the gas tank, run the engine until carburetor's dry, and cover the whole works with canvas. If it needs repairs, get it fixed before storing — no wait-till-later delays.

Supply types call the Mity Mite by its book name, which is Dispenser, Riot Control Agent, Backpack 450CFM, M106, FSN 1040-782-6891.

END

When you're depending upon your reefer to keep your chow from spoiling, then it's a good idea to play it cool by learning the A, B, C's of its operation and maintenance.

Here's how you can take care of your

THERMO-KING MODEL QL9M1 REFRIGERATION UNIT
FSN 4110-967-9762

Don't try to move that baby unless the lifting device can take a load of at least 1000 pounds because the unit weighs 900 pounds.

OK, you've got her placed on your 7½-ton semi, so back off and take a look to make sure she's level. That's so your reefer's crankcase oil will keep the bearings lubed. If she's not level, they'll burn out because they don't get lubed.

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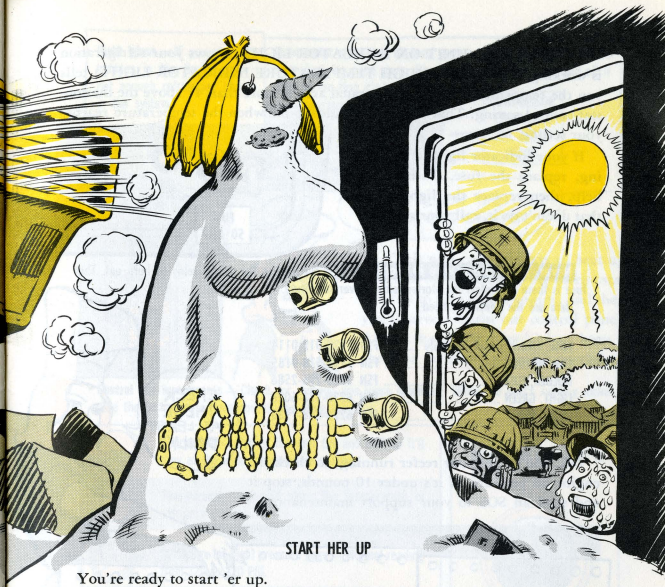
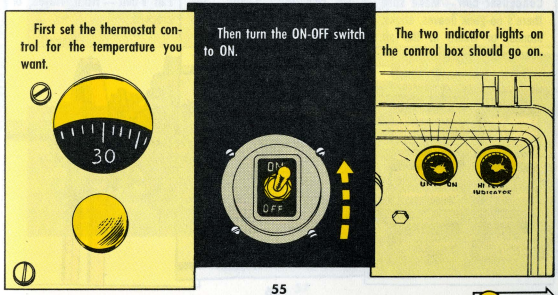
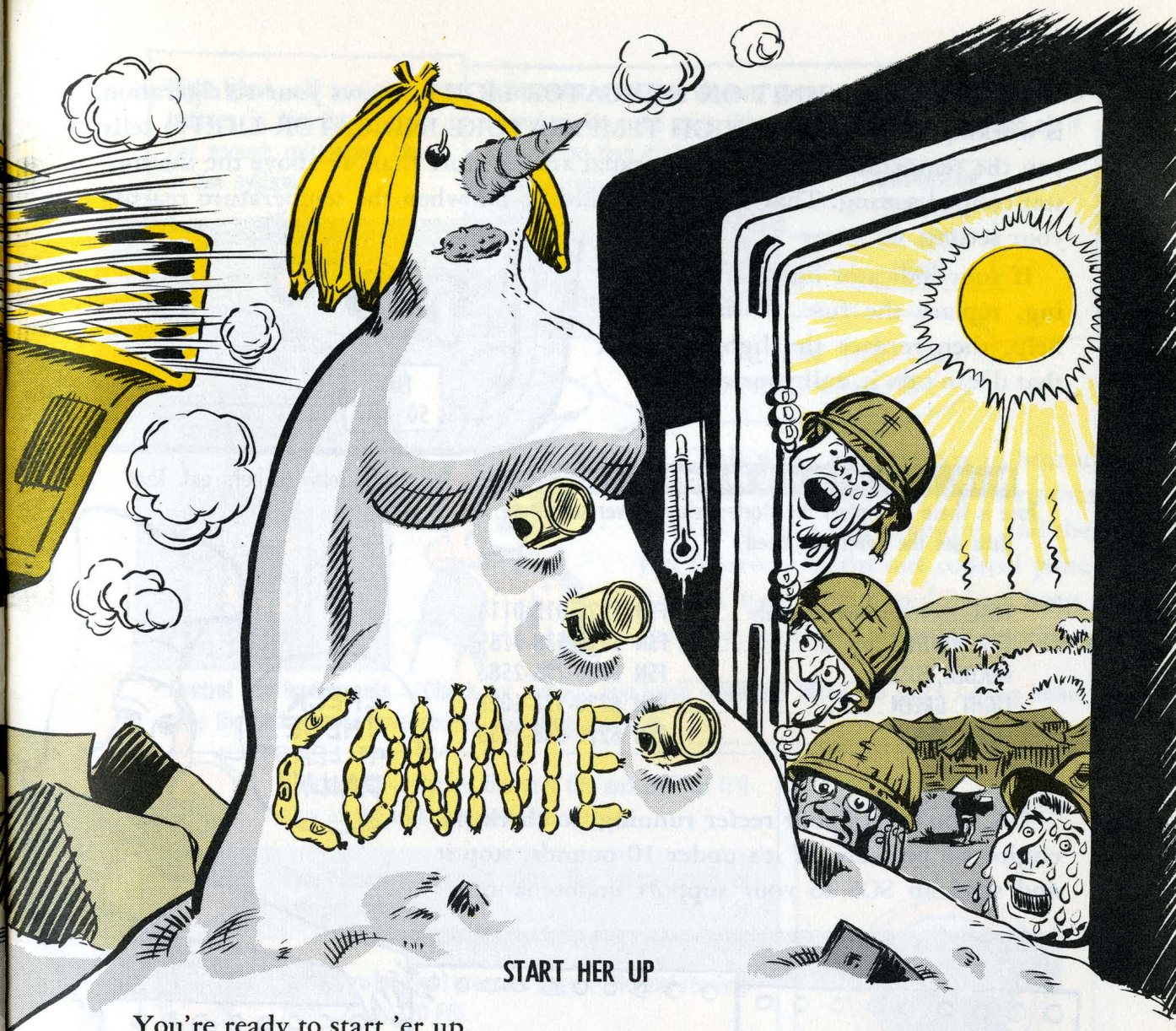


START HER UP

You're ready to start 'er up.



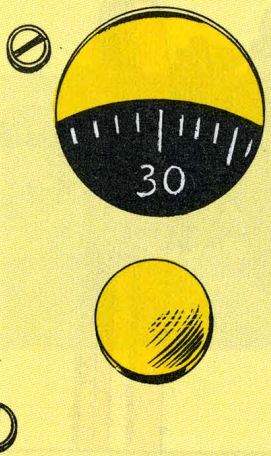
MORE



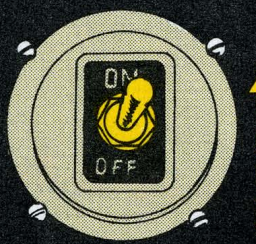
START HER UP

You're ready to start 'er up.

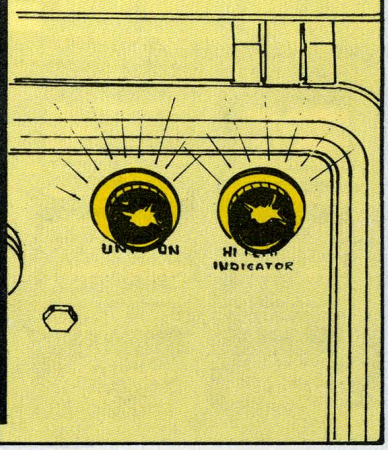
First set the thermostat control for the temperature you want.



Then turn the ON-OFF switch to ON.



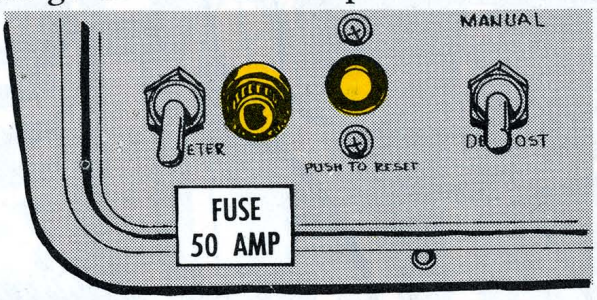
The two indicator lights on the control box should go on.



P.S. MORE

The green light (UNIT ON INDICATOR LIGHT) shows your refrigeration is working. The red light (HIGH TEMPERATURE INDICATOR LIGHT) tells you the temperature in the refrigerated area is more than 4° above the thermostat control setting. That red light should go off when the temperature reaches your setting.

If your indicator lights aren't working, replace the fuse. If that doesn't help, then replace the lights. And if that doesn't do it, call your support.

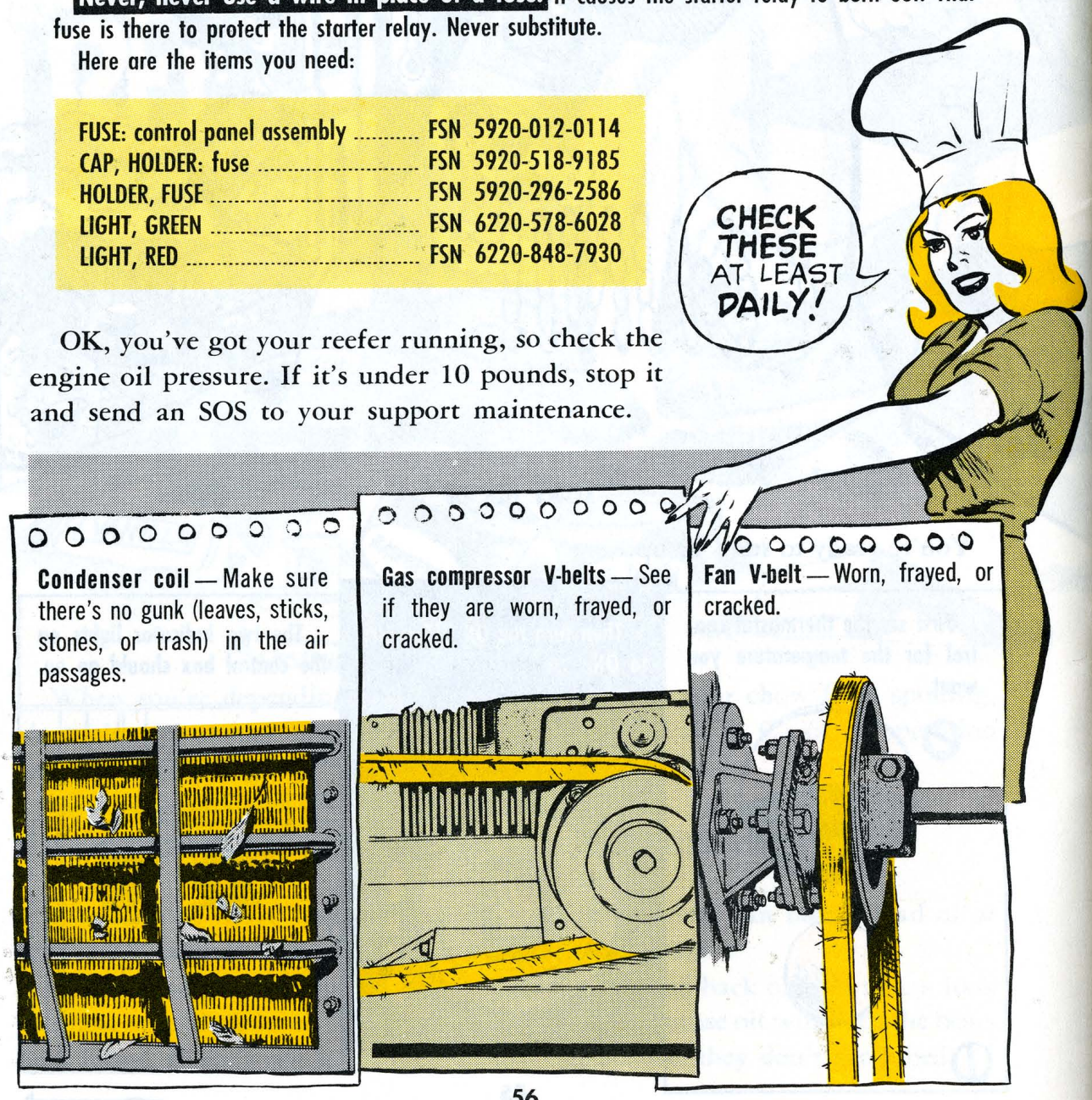


Never, never use a wire in place of a fuse. It causes the starter relay to burn out. That fuse is there to protect the starter relay. Never substitute.

Here are the items you need:

FUSE: control panel assembly	FSN 5920-012-0114
CAP, HOLDER: fuse	FSN 5920-518-9185
HOLDER, FUSE	FSN 5920-296-2586
LIGHT, GREEN	FSN 6220-578-6028
LIGHT, RED	FSN 6220-848-7930

OK, you've got your reefer running, so check the engine oil pressure. If it's under 10 pounds, stop it and send an SOS to your support maintenance.



Sight glass — If you can see bubbles in the liquid, there's not enough refrigerant charge in the system.

Compressor crankcase oil level gage — Check oil level. It should be midway on sight glass. Check your Lube Order and add oil if gage shows that it's low.

Fuel tank — Add fuel if low.

This will cause the box to heat up which in turn will cause the thermostat to work to turn on the engine, and then you'll have a burnt out control panel. Always have attendant/driver keep a check on the reefer when it's operating.

Control and Instruments — Check for damage and loose mounting. While the unit's running make sure the instruments have normal operating readings.

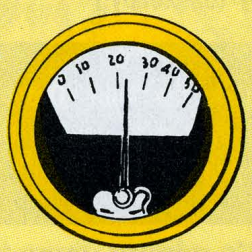
Thermostat — Cycles the unit ON and OFF so it'll stay at the right temperature setting.

Thermometer — Should show the temperature of refrigerated area.

Discharge (or high) pressure gage — Normal reading from 120 to 220 PSI.

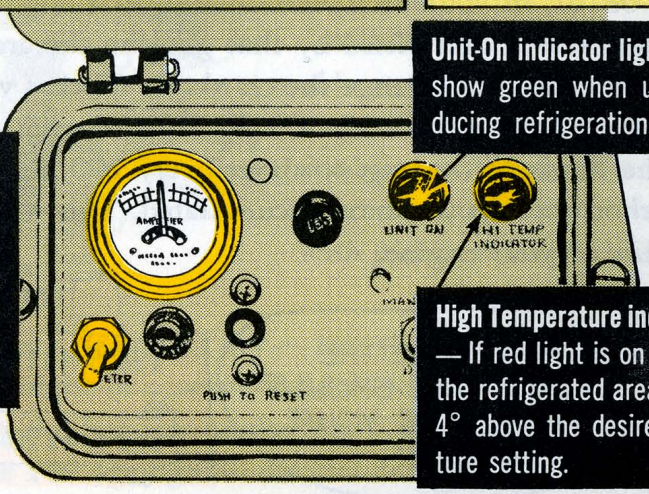
Suction pressure gage — Normal reading from 1 to 10 PSI.

Oil pressure gage — 20 to 35 PSI.



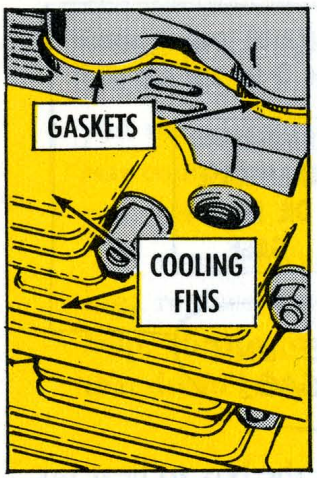
Unit-On indicator light — Should show green when unit is producing refrigeration.

Ammeter — When you check this, just push the switch on to get a reading and let go fast. If you hold it on you'll burn out the control panel fuse. (Your ammeter normally shows a slight charge.)



High Temperature indicator light — If red light is on you'll know the refrigerated area is at least 4° above the desired temperature setting.

PS MORE

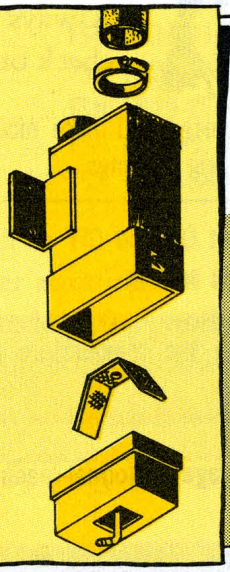


Your reefer has automatic defrosting (every 4 hours of operation). If you want to use manual defrost switch, just push the manual defrost switch and release it while the unit is running. If it doesn't need defrosting, the unit will continue on its refrigeration cycle.

While you're running an eagle eye over your reefer, take a look at the cooling fins on the cylinder block to make sure they're clean. Check the compressor for oil leaks, especially around the gaskets. Sometimes these gaskets have a tendency to leak after the compressor has been running for about 10 hours or longer.

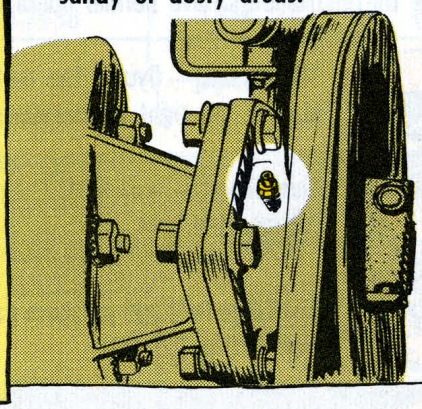
You'll want to listen for unusual noises and vibration while your reefer's running. If you're in a dusty or sandy area, then you'll have to clean the condenser coil at least once a week—more often is even better.

You'll need to service the air cleaner more often, too. (You remove the screw from the bottom of the air cleaner body, then remove the oil cup. Next take the screen out of the oil cup. Then clean the parts with a good cleaning solvent and dry completely.)



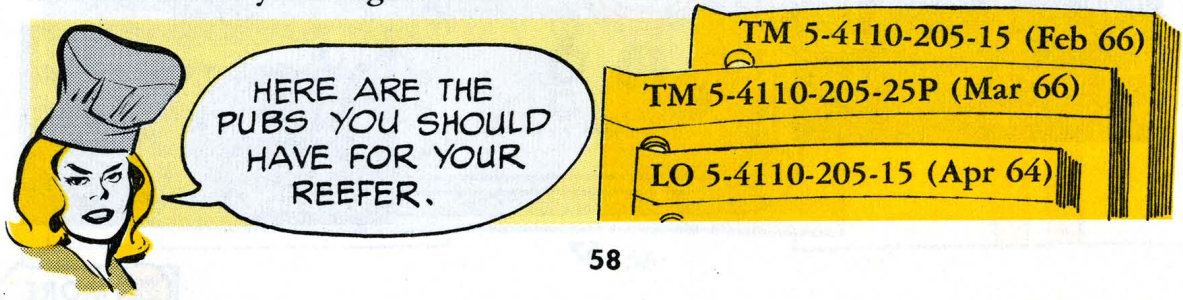
Check the Lube Order so you'll not miss any of those lube points.

Make sure you lube the condenser and evaporator fan bearings or they'll burn out in sandy or dusty areas.



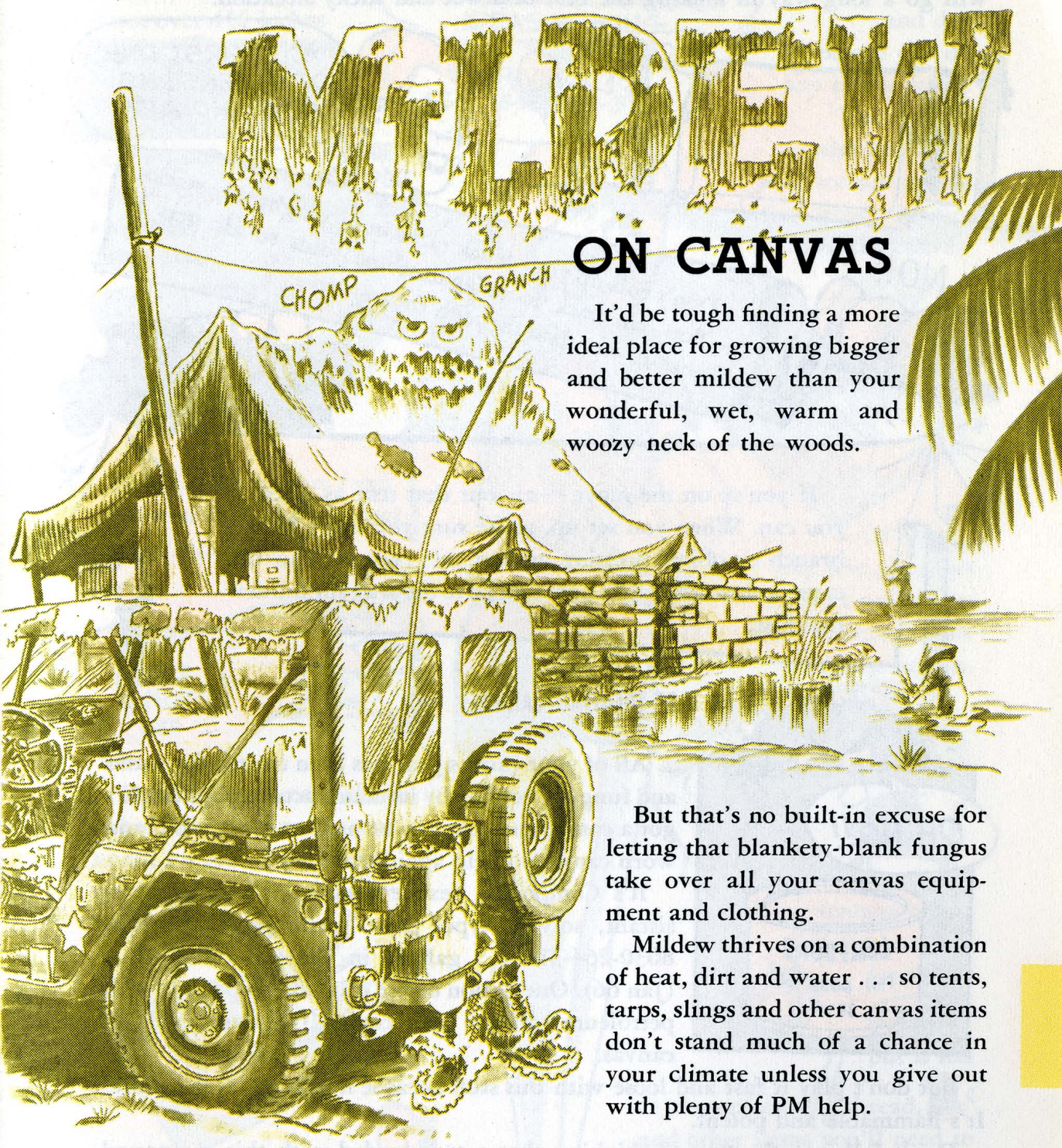
It's mighty important to keep all lubes clean. There's an Onan engine (FSN 2805-963-0870), in your refrigeration unit that doesn't digest sludge and grit. Bearings get scored and pitted by that gook in the crankcase oil.

Make sure when you change the crankcase oil that you get all the sludge and grit. You may have to flush the crankcase to do this. It's also a good idea to remove the heads of the engine about every 200 hours of operation and clean off the carbon deposits that have accumulated. This will give better performance and add life to your engine.



BEST DEFENSE IS GOOD OFFENSE

WHAT TO DO WITH MILDEW ON CANVAS



It'd be tough finding a more ideal place for growing bigger and better mildew than your wonderful, wet, warm and woozy neck of the woods.

But that's no built-in excuse for letting that blankety-blank fungus take over all your canvas equipment and clothing.

Mildew thrives on a combination of heat, dirt and water . . . so tents, tarps, slings and other canvas items don't stand much of a chance in your climate unless you give out with plenty of PM help.

Keeping your canvas gear clean and dry — like the good book says — is like trying to fill an inside straight in a seven-handed poker session . . . 'ruff!

But whether you're in the boonies or the Big City, you have two big free allies on your side of the PM fire-fight — air and sunlight.

PS MORE

Yup, hanging your canvas up to air out and keeping it as clean as possible will go a long way in making the best of a wet and sticky situation.

If you're on the move—air out that tent as often as you can. When you set up, make sure you don't have a branch or object pressing against wet canvas. This can cause a slow leak right now and pave the way for mildew real fast.

RE-TREATING CANVAS

All of your canvas gear has been treated for water and fungus-proofing by its manufacturer, but Uncle's got a compound that can be used to re-treat old and worn canvas to help against mildew.

It's Compound, textile preservative, mildew resistant, solvent type, paste form, pigments, FSN 8030-264-3840, 5 gallons in Fed Cat C8000-IL-A (Jan 66). One gallon of the diluted compound (with petroleum solvent) will cover 10 square yards of canvas.

But don't play it fast and loose with this stuff because it's potential dynamite. It's flammable and potent.

Don't fall into the trap of thinking that a tent loaded with this compound makes it completely water and mildew-proof—it won't. But it will make it harder for mildew to establish a beachhead.

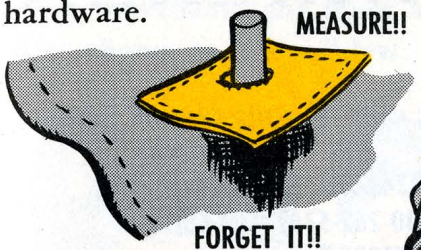
You can't pour this stuff on like syrup on a stack of flapjacks . . . hit it lightly and carefully.

HERE'RE SOME **PATCHING** IDEAS — USING THE TENTAGE REPAIR KIT! FSN 8340-267-5767.

You can patch your tent if the tear is not over 4¾ inches

or if it's not on a seam, edge, or area supporting hardware.

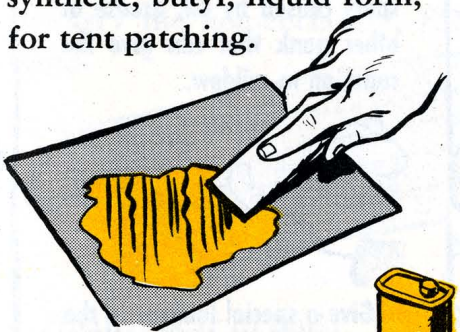
INCLUDE WEAK SPOTS BETWEEN HOLES WHEN YOU MEASURE!!



FORGET IT!!

You cut the patches from the cotton duck cloth in your tentage repair kit.

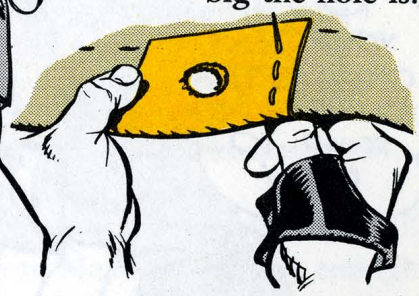
You'll need some stickum to hold the patch to the tent, so ask for Adhesive, rubber synthetic, butyl, liquid form, for tent patching.



FSN 8040-266-0850 gets you a pint and FSN 8040-275-8100 will get you a gallon.

Be sure your tent is clean and dry before you do any repair work. You use the wire brush (in your tentage repair kit) to brush the dirt from the canvas.

Of course, you sew grommet support patches by hand no matter how big the hole is.



Your tentage repair kit not only has grommets

but it has needles,

thread,

and other items you'll need to do a neat repair job. So don't bother to turn your tent in to support for those do-it-yourself repairs.

P.S. MORE

ZIPPER KIT, TOO

If you're having trouble with a sluggish zipper, rub some Zipper Lubricant, FSN 9150-999-7548 on each side of the track and then run the zipper up and down a few times. A wax candle will also do a good job.

In case your zipper needs a new slide or stop, ask for Kit, Slide and Top Stop.

PUBS AND KITS

Here are the pubs and kits to help you take care of your canvas items:

TM 10-269, General Repair for Canvas and Webbing (May 64), C2 (Sep 65)
TM 10-633, Canvas Repair Kit (Sep 48), C1 (Apr 65)
FM 20-15, Pole and Frame Supported Tents (Sep 64)
SM 10-4-8340-A11, Tentage Repair Kit, FSN 8340-262-5767 (Jul 63) Fed Cat C5325-IL-A (Jan 66), CB5 (Apr 67).
Kit, Slide and Top Stop, FSN 5325-898-4411,

CANVAS STORAGE TIPS

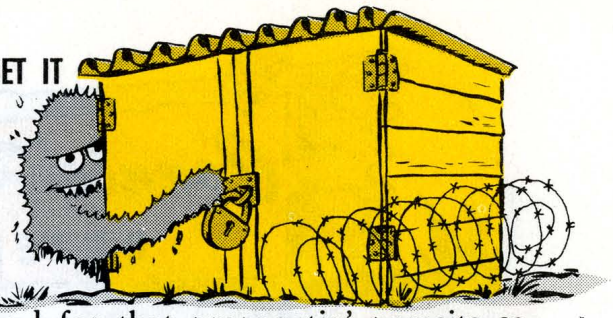
Battling mildew on gear that gets day-to-day use is tough enough, but the fight moves into high gear when the word comes to store your stuff.

After it's dry, get rid of any spots caused by oil, grease or other gunk that can give the come-on to mildew.

Give a special looksee in the folds; make with a stiff wire brush and elbow grease in this area because it's a good nesting spot for mold.

Never roll stakes and poles up in a tent you're going to store. They're bound to have some moisture on 'em that'll eat a hole right through your canvas.

NEVER FORGET IT



OK. You've done your level best to clean and air-dry your gear. But don't quit at this stage of the game because you can't store it and forget it.

Stored canvas is the happy hunting ground for that propagatin' parasite so fight it all the way.

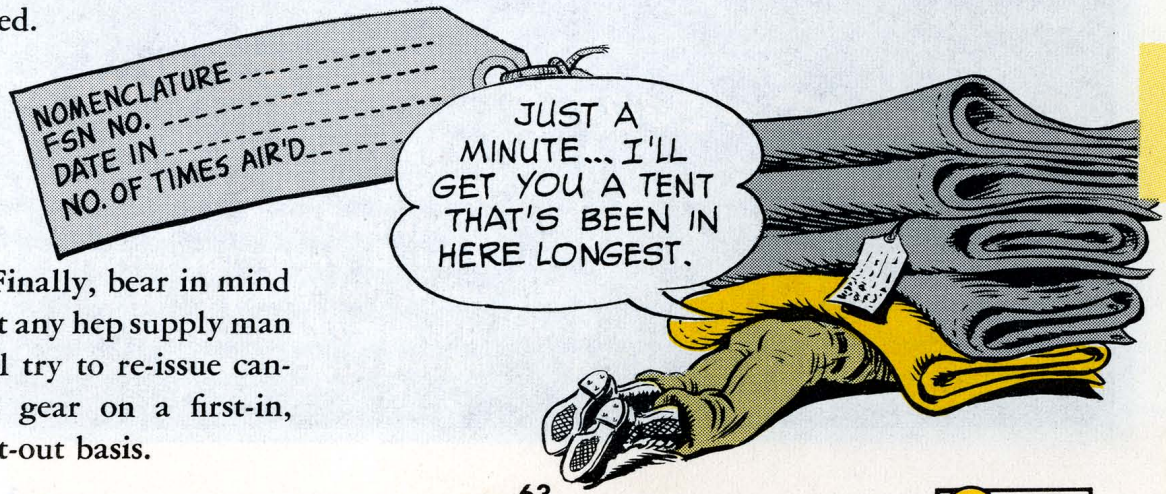
Check it often and don't be afraid to move some of the items around—the more movement, the more air circulation and the more circulation the better your chance to lick mildew.

When you stack away those clean and dry items, see that the dunnage is as clean and dry as you can make it. Green lumber just opens another one of the thousand doors for mold and mildew.

Never use material handling equipment to move stored items unless you have 'em stacked on pallet boards for proper pickup. Forklift blades rip and gouge

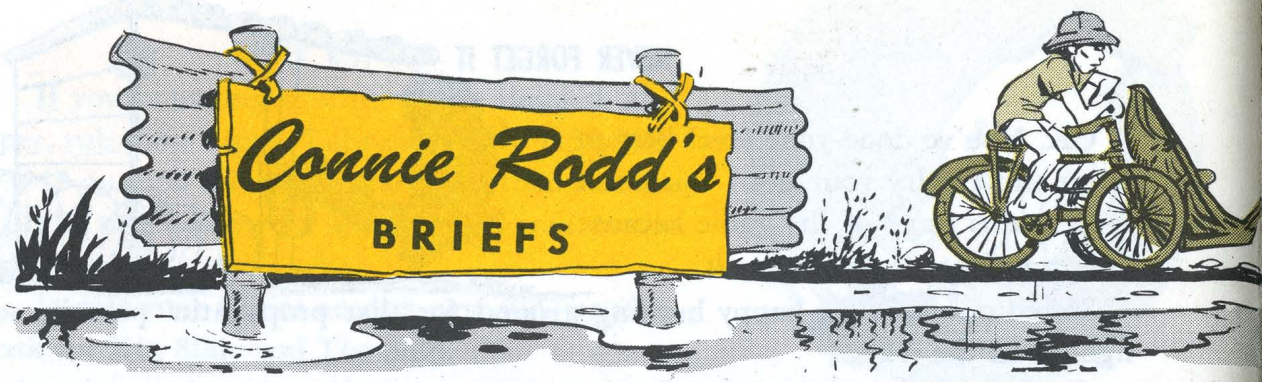
canvas and this won't help your monsoon program a little bit.

Get the habit of tagging all your gear before you store it away. It'll save all kinds of sweat and time when re-issue time hits you. Make the tag big enough to carry the nomenclature, FSN, date of storage and dates of times it's been aired.



Finally, bear in mind that any hep supply man will try to re-issue canvas gear on a first-in, first-out basis.

PS END



"C" for CBR Items

For your CBR items that take calibration, see TB 750-109 (14 Jul 66), Calibration Requirements for Test and Measuring Equipment Used to Support Munitions Command Materiel. For the time being, however, you can forget about the M15 Breathing Apparatus listed in the TB. Complete scoop on calibration needs for the BA will be up-dated when the TB is revised.

290M Tractor Safety Fix

That cable northbound out of the tachometer drive is vital. It hooks up to the overspeed governor on that bracket over the intake manifold. Keep it waterproof-tight, else it'll rust inside. This dope's not in your TM 5-2420-206-15, but it's in the manufacturer's TM supplement in your overpack kit.

ESC And DA 2408-3

Your equipment ESC check falls in the category of "before, during and after" operation checks. As such it is not recorded in block 11 of DA 2408-3. But the **result** of the ESC check is entered quarterly in block 14 of DA 2408-3.

Profile Poop

If you're a **Unit Readiness** reporter, using DA Form 2715, grab the new AR 220-1 (20 Feb 67) before your next report is due 20 June 1967. It supersedes the old AR 220-1 and — except for Reserve and National Guard units under AR 135-8 — also supersedes AR 750-10. The basic Unit Readiness system stays the same, but many details are changed.

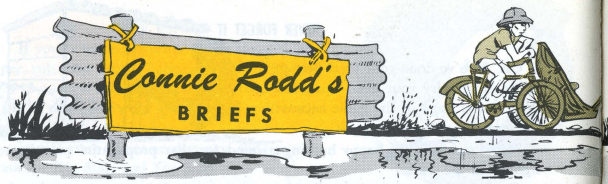
Different Winch Shafts

Your 2½-ton multifuel engine truck (either A1- or A2-series) uses Shaft, drive, front winch, FSN 2520-924-1529. TM 9-2320-209-20P (Jan 65) shows FSN 2520-753-8741, but that one's for only the gasoline engine job. This'll be cleared up in a TM change or revision.

Store 'Em Uncocked

There's no Army directive that says you don't store small arms in racks in a cocked position. But, leaving 'em cocked won't do the springs any good being set like that for a spell. So, any time you rack your rifle or carbine or shelf your machine gun, leave it uncocked. OK?

Would You Stake Your Life right now on



"C" for CBR Items

For your CBR items that take calibration, see TB 750-109 (14 Jul 66), Calibration Requirements for Test and Measuring Equipment Used to Support Munitions Command Materiel. For the time being, however, you can forget about the M15 Breathing Apparatus listed in the TB. Complete scoop on calibration needs for the BA will be up-dated when the TB is revised.

290M Tractor Safety Fix

That cable northbound out of the tachometer drive is vital. It hooks up to the overspeed governor on that bracket over the intake manifold. Keep it waterproof-tight, else it'll rust inside. This dope's not in your TM 5-2420-206-15, but it's in the manufacturer's TM supplement in your overpack kit.

ESC And DA 2408-3

Your equipment ESC check falls in the category of "before, during and after" operation checks. As such it is not recorded in block 11 of DA 2408-3. But the **result** of the ESC check is entered quarterly in block 14 of DA 2408-3.

Profile Poop

If you're a **Unit Readiness** reporter, using DA Form 2715, grab the new AR 220-1 (20 Feb 67) before your next report is due 20 June 1967. It supersedes the old AR 220-1 and — except for Reserve and National Guard units under AR 135-8 — also supersedes AR 750-10. The basic Unit Readiness system stays the same, but many details are changed.

Different Winch Shafts

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Cheaper?

Quite a bit! You can now order just the Cushion, Seat, FSN 2540-887-8919 for your XM501E2 and XM501E3 hawk loaders instead of the complete seat assembly FSN 2540-777-4091. When your cushion gets shot, fill in any gaping holes, put some stick-tape over 'em to hold the stuffing in, and put the new cushion over the seat pan, ol' cushion and all.

Screen & TA Scene

The new DA Pam 108-1 (Sep 66) goes by the title of "Index to Army Films, Transparencies, GTA Charts And Recordings." And, yep, it supersedes the old, fat DA Pam 310-5, which used to index GTA's and devices.

Not the Same

You can be unconfused if you'll jot this number down — W27729. That's the new Line Item Number for tool kit TK-21/G, FSN 5180-408-2391 (old LIN 569721 which was converted to 689260). Your TK-87/U, FSN 5180-690-4452, belongs to LIN W49581 (old LIN 571325).

Pol Nuggets

There's gold in them thar log book records if you're handed the job of figurin' your unit's POL needs. You won't find a better picture of just how much grease, oil and fuel your outfit's equipment has used — and this gives you a pretty good idea of how much'll be needed. Sure. it takes a little digging, but that's the way it is with gold mines.

By the Numbers

Page 15 of TM 9-1430-253-15P/2/1 (Jun 66) says the 5751 electron tube goes by FSN 5960-193-5145, but the container the tube comes in shows FSN 5960-082-4139. What's right? Somehow. the tube was given both FSN's, but 5960-193-5145 is the one you want to use.

This One's A Must!

TM 5-6115-365-15 (May 66) tells about a host of power units, trailer-mounted, from 3-KW to 100-KW. More mobility and reliability is the idea — and the new TM has essential parts lists. Check your pubs people fastest.

Would You Stake Your Life right now on the Condition of Your Equipment?

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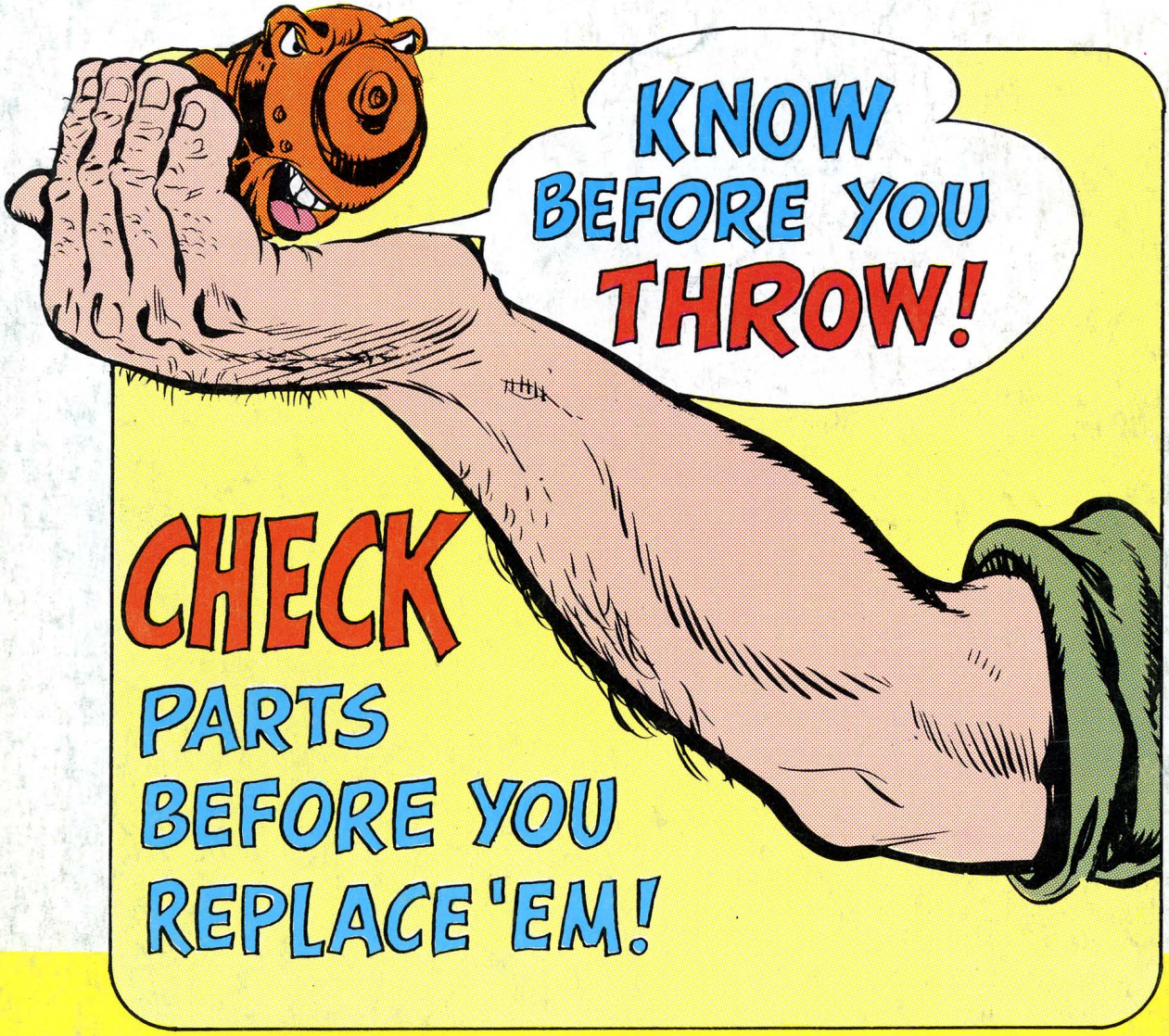
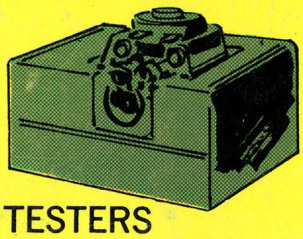


CHECK PARTS BEFORE YOU REPLACE 'EM!

USE YOUR . . .

GAGES



TESTERS

MULTIMETERS

LOW-VOLTAGE CIRCUIT TESTER

OR THE OTHER GAGES, TESTERS, METERS IN YOUR AUTHORIZED TOOL KITS.

MAKE SURE THE PARTS YOU REPLACE ARE REALLY BAD!